

## INTRODUCTION AND BACKGROUND

The most defining event in the natural gas industry, over the past year, was the extremely cold winter weather affecting the large population centers in the eastern half of the country. Early in January of 2014, the polar vortex weakened allowing pockets of cold air to move farther south than usual. High pressure in the Arctic caused the jet stream to buckle carrying this cold arctic air to the upper Midwest and Northeast. The rarity of this phenomenon has caused some to refer to the winter of 2013/14 as a “black swan winter.”

The National Climatic Data Center has divided the contiguous United States into nine geographic regions, and has maintained temperature data for all these regions going back 119 years. For the three winter months of December of 2013 through February of 2014, the Upper Midwest Region had the sixth coldest winter on record, the Ohio Valley Region had the twelfth coldest, and the South Region had the twenty-first coldest.<sup>2</sup> The prevalence of cold during the three winter months resulted in 91 percent of the Great Lakes being frozen by the end of February. Since records were first kept in 1973, this was the second largest ice cover recorded for the Great Lakes.<sup>3</sup>

In the Midwest, approximately 36 percent of homes use propane as the primary space heating fuel.<sup>4</sup> Due to shortages brought about by the extreme cold, the Federal Energy Regulatory Commission (FERC), on February 7, 2014, invoked its emergency authority under the Interstate Commerce Act (ICA) to require priority treatment of propane shipments via pipeline to consumers in the Midwest and Northeast. This occasion marked the first time that the FERC had ever used its broad emergency authority under the ICA. Priority treatment of propane shipments was extended through February 21, 2014.<sup>5</sup>

New national records, daily, weekly and monthly, were set for the consumption of natural gas during the month of January 2014. The Energy Information Administration (EIA) reported that the highest peak-day consumption ever recorded in U.S. history occurred on January 7<sup>th</sup> at a level of approximately 137 Bcf.<sup>6</sup> Data from the EIA also indicated that total U.S. natural gas consumption for the month January 2014 was the highest on record at an average volume of 103.8 Bcf per day. New monthly records were also set for average deliveries to residential customers at 33.6 Bcf per day, commercial customers at 18.5 Bcf per day, and industrial customers at 23.3 Bcf per day.<sup>7</sup>

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<sup>2</sup> National Temperature and Precipitation Maps, National Climatic Data Center, National Oceanic and Atmospheric Administration, December 2013 through February 2014 Regional Ranks, March 13, 2014.

<sup>3</sup> National Overview – February 2014, National Climatic Data Center, National Oceanic and Atmospheric Administration, March 28, 2014.

<sup>4</sup> Energy Information Administration, Short-Term Energy and Winter Fuels Outlook, October, 2013.

<sup>5</sup> Federal Energy Regulatory Commission, News Release: February 11, 2014, Docket Nos. OR14-19-000, OR14-20-000.

<sup>6</sup> “Natural Gas Weekly Update for the Week Ending January 8, 2014,” Release Date January 9, 2014, U.S. Energy Information Administration, U.S. Department of Energy.

<sup>7</sup> “Natural Gas Consumption in the United States, 2009-2014,” Table 2, Natural Gas Monthly March 2014, U.S. Department of Energy, U.S. Energy Information Administration, Office of Oil, Gas, and Coal Supply Statistics, Release Date March 31, 2014.

All indications are that the natural gas industry successfully met the challenges of the winter of 2013/2014. Dave McCurdy, president and CEO of the American Gas Association summed it up as follows:

“The 2014 record-setting winter with prolonged cold temperatures and peak demand conditions has demonstrated the readiness and resiliency of America’s natural gas network. Natural gas utilities work all year to prepare for these types of cold temperatures, and employ a portfolio approach to help ensure they can meet the needs of their customers at affordable prices. Providing this kind of safe and reliable service has been not just the core business, but the mission of natural gas utilities for decades.”<sup>8</sup>

As discussed in previous IRP documents, technological improvements in drilling have led to substantial increases in natural gas reserves and deliverability in the U.S., particularly in shale gas plays. Many industry analysts believe that without the abundance of natural gas supply deliverability resulting from the shale boom of recent years, the January 2014 weather events would have been much more costly.

During calendar year 2013, U.S. dry natural gas production grew approximately one percent over 2012. This production growth occurred in conjunction with an approximate 35 percent increase in natural gas prices from 2012. Declining production in most U.S. basins was offset by increases in the Marcellus shale (Appalachian Basin). Dry gas production from the Marcellus increased in 2013 by 61 percent (3.9 Bcf/d) over 2012.<sup>9</sup>

The atypical weather events of this past winter caused unprecedented volatility in natural gas prices in the capacity-constrained Northeast. On one pipeline supplying both New York and New Jersey, average day-ahead natural-gas prices reached levels above \$120 per Dth on January 21, 2014.

The western United States also experienced price volatility, but to a lesser magnitude. In early February of 2014, the combination of cold winter weather, lower storage inventories and reduced pipeline inflows from Canada, precipitated a run-up in natural gas prices at some western hubs to 10-year highs.<sup>10</sup> On February 5<sup>th</sup>, average day-ahead prices at Opal, Wyoming rose above \$25 per Dth. Questar Gas has historically purchased significant quantities of natural gas tied to that index. By mid-February, prices at Opal were back to the low five-dollar-per-Dth range.

Current indications are that natural gas will be moderately priced for the foreseeable future. In recent weeks the Henry Hub natural gas futures forward curve had prices through the summer and fall shoulder months of 2014 in the mid four-dollar-per-Dth range. Henry Hub futures’ prices rise slightly during the winter of 2014/2015, and then decline during the

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<sup>8</sup> “Natural Gas Met the Challenge of Winter 2013-2014,” American Gas Association, News Release: March 27, 2014.

<sup>9</sup> “Production Lookback 2013,” Issues and Trends: Natural Gas, Released January 16, 2014, U.S. Energy Information Administration, U.S. Department of Energy.

<sup>10</sup> “Natural Gas Weekly Update,” For week ending February 12, 2014, Release Date: February 13, 2014, U.S. Energy Information Administration, U.S. Department of Energy.

summer of 2015 to the low four-dollar-per-Dth range. The highest prices over the 36-month strip currently are under five-dollars-per Dth.

Recent data from the EIA indicate that energy related CO<sub>2</sub> emissions in the U.S., during calendar year 2013, totaled 5.38 billion metric tons. This level is more than 10 percent below the 2005 level. The general decline from 2005 is largely attributed to the weak economy, improving energy efficiency, and growing use of abundant natural gas. The replacement of coal-fired power generation with generation from less carbon-intensive natural gas has been fundamental to that general eight-year decline.<sup>11</sup>

The cold winter of 2013/2014 had a profound impact on national natural gas storage withdrawals and inventories for the lower 48 states. Two national weekly storage withdrawal records were set this past winter, according to data maintained by the EIA. The highest all-time weekly withdrawal occurred during the week ending January 10, 2014, at a level of 287 Bcf. The second highest weekly withdrawal occurred during the week ending December 13, 2013, at a level of 285 Bcf.<sup>12</sup>

The first of November is traditionally considered to be the end of the storage injection season and the beginning of the withdrawal season. The first of April is generally considered to be the end of the withdrawal season and the beginning of the injection season. On November 1, 2013, the EIA reported that the total national storage inventory stood at 3,814 Bcf. By the end of March 2014, the inventory level was at 822 Bcf, an eleven-year low. Over the last five years, the average end-of-March level for national inventories was 1,815 Bcf. The March 2014 level is 54.7 percent below the five-year-average portending a potential record-setting injection season this summer to get back to the 3,814 Bcf inventory level of November 2013.<sup>13</sup> Demand for storage volumes during the 2014 injection season will undoubtedly exert additional upward pressure on natural gas prices beyond what would have occurred had the beginning inventory been closer to average.

In earlier decades, natural gas storage capacity was largely obtained by regulated utilities and used to meet winter-time base-load requirements, daily-load fluctuations, and peak-day needs. Over the last decade, natural gas marketers have increasingly used storage as a means to capture value from short-term price arbitrage. While there appears to be ample storage capacity in the aggregate in North America, it is safe to assume that additional increments of capacity will be developed when and where they can be justified by regional economics. For a recap of recent natural gas storage projects in the vicinity of the demand areas of Questar Gas, and a discussion of Questar Gas' involvement see the "Gathering, Transportation and Storage" section of this report.

As mentioned earlier, the Northeast sector of the country is generally considered to be constrained from an interstate pipeline capacity standpoint. Those pipeline constraints contributed to the extreme natural gas price volatility experienced in January and February of

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<sup>11</sup> "Short-Term Energy Outlook - March 2014," U.S. Energy Information Administration, U.S. Department of Energy.

<sup>12</sup> "Weekly Natural Gas Storage Report for Week Ending March 28, 2014," Released April 3, 2014, U.S. Energy Information Administration, U.S. Department of Energy. Also, data was used from the accompanying historical table.

<sup>13</sup> Ibid.

2014. A number of pipeline projects were completed by last fall in the Northeast, but the extreme weather events of the recent winter punctuated the need for even more capacity. Projects scheduled for completion in the U.S. during the remainder of 2014 are primarily in the Northeast and central regions of the U.S. (pipeline and compression).<sup>14</sup>

Prior to the natural gas shale revolution, customers in the population centers of the Northeast largely received natural gas service from long-haul pipelines originating from the Gulf Coast. With the development of the vast natural gas resources of the Appalachian Basin in general, and the Marcellus shale in particular, traditional interstate pipeline flow paths have been altered. This spring and summer, three pipeline projects have begun, or will begin, moving Appalachian gas to markets: the ANR Pipeline Lateral Project, the Tennessee Gas Pipeline Utica Back-Haul Project, and the Rockies Express Pipeline (REX). REX is expected to begin flowing to the Midwest this summer, counter to its originally designed flow path.

On June 2, 2014, the U.S. Environmental Protection Agency (EPA) issued a draft rule requiring a reduction of carbon dioxide emissions from existing coal plants by up to 30% by 2030, based on 2005 emission levels. If the rule becomes final, power generation facilities are likely to substantially increase the use of natural gas.

Natural gas demand in California and the Southwest is likely to increase in the foreseeable future, for a number of reasons. First, on June 7, 2013, SoCal Edison announced the permanent retirement of Units 2 and 3 of its San Onofre nuclear power plant. That retirement will result in increased natural gas demand of 500,000 Dth/d. Though entities continue to construct wind and solar generation facilities in this region, those facilities do not completely offset the anticipated loss of coal generation facilities. Also, they are not available at the same utilization rate as coal. The low utilization rates for wind and solar support increased usage of gas-fired generation.

Natural gas-fired generating facilities that are expected to be built between 2014 and 2020 total 3,558 MW of new capacity to serve this region. Power demand will be the biggest driver of California/Southwest growth in the future with natural gas demand expected to increase 2.4 Bcf/d by 2018. In addition, U.S. natural gas exports to Mexico will accelerate in the next five years and are anticipated to increase 2 Bcf/d between 2014 and 2019. In total, Mexican natural gas demand is projected to increase 5.1 Bcf/d by 2027 due to a mass build-out of gas-fired power generation. Mexico will compete with California and the Southwest for natural gas from the Rockies and Texas. This will put increased pressure on pipeline delivery capacity to that region.

Currently, 80% of the California inbound pipeline capacity is already being utilized, and there remains roughly 2 Bcf/d of capacity. With the anticipated increased demand for natural gas for both California/Southwest and Mexico, this capacity utilization could easily reach 100% in the near future. In addition, Rockies production has already begun to move west filling power demand in the Southwest and California markets.

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<sup>14</sup> "U.S. Natural Gas Pipeline Projects," Release date: April 7, 2014, Energy Information Administration, U.S. Department of Energy, <http://www.eia.gov/naturalgas/data.cfm>.

Interest in the use of natural gas as a vehicle fuel continues to grow. During the past year, approximately 130 compressed natural gas (CNG) stations have been added to the nation's infrastructure, bringing the total to over 1,319 with an additional 128 stations planned. A number of local distribution companies (LDCs) and exploration and production (E&P) companies around the country are fostering the growth of CNG as a retail transportation fuel by investing in the expansion of CNG refueling infrastructure.

Original Equipment Manufacturers (OEMs) have both increased production of light and medium-duty CNG vehicle platforms as well as introduced a number of new vehicle models. Class 8, over-the-road CNG vehicle platforms have seen an uptick with refuse hauler manufacturers leading the charge by producing more factory-built CNG models than diesel or gasoline models.

Congress allowed the \$0.50 per gasoline gallon equivalent (GGE) tax credit for fuel providers like Questar Gas to expire on December 31, 2013. However, the tax credit may be reinstated along with over three hundred other tax incentive programs after the November 2014 elections. Through the regulatory process, the National Highway Traffic Safety Administration (NHTSA) which regulates the nation's Corporate Average Fuel Economy (CAFE) standards recently gave additional fuel economy credits to vehicle manufacturers for the production of natural gas vehicles (NGVs).

Questar Gas is a national leader in the promotion of natural gas as a vehicle fuel. According to a recent NGV marketing study by TIAX, LLC published in February, 2013, the Questar Gas service territory accounts for approximately 11,000 CNG vehicles (9% of the total CNG vehicles on the road today in the U.S.). Exhibit 2.1 is a map of the CNG station locations in Utah.

Beginning in 2009, Questar Gas began installing new public access CNG infrastructure facilities and upgrading existing public access facilities. The U.S. Department of Energy (DOE) provided partial funding for these new installations and upgrades in the form of a grant. The grant-funded updates have been completed and the Utah Commission has allowed Questar Gas to allocate \$1.5 million annually for additional stations and station upgrades. New installations were completed in Cedar City, Utah and Rock Springs, Wyoming with construction having begun on a new CNG Facility in Salina, Utah.

Public usage of Questar Gas' CNG system has grown. Table 2.1 shows annualized GGEs for the past five years (based on 124,400 Btus per gallon<sup>15</sup>).

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<sup>15</sup> Going forward from January 2014, the BTU measurement value for CNG has changed. Based upon the Utah State Department of Weights and Measures requested change, Questar Gas will now measure GGEs at 5.66 pounds, which is approximately 135,000 ± BTUs per GGE.

Table 2.1

<b>Year</b>	<b>GGEs</b>	<b>% Growth</b>
2008	3,499,067	
2009	3,862,037	10.4%
2010	4,145,802	7.3%
2011	4,714,135	13.7%
2012	5,592,512	18.6%
2013	5,844,181	6.2%

During its 2014 General Session, the Utah Legislature passed two bills promoting the use of clean burning natural gas. Utah House Bill 74 extends tax credits for clean-fuel vehicles including natural gas. House Bill 154 creates a program in Utah to convert dwellings heated solely with wood to be converted to natural gas or another clean fuel heating source. The Legislature designated \$750,000 to fund a public awareness campaign and facilitate conversion of approximately 200 homes relying exclusively on wood burning stoves.

In recent years, the increase in shale gas production has focused attention on the environmental impacts of hydraulic fracturing. Hydraulic fracturing involves pumping fluid at high pressures into natural gas reservoirs to induce fractures in the formation. These fractures provide for better connectivity between the wellbore and the surrounding reservoir rock thereby enhancing natural gas production rates and total recoverable reserves. Fracture fluid contains approximately 90 percent water, 9.5 percent sand, and 0.5 percent additives. When the casing of an oil or gas well is properly cemented, formations containing ground water are isolated from those producing hydrocarbons. Studies by Federal agencies in the 1990's and early 2000's generally concluded that the risk of contamination of sources of drinking water by hydraulic fracturing fluids posed little or no threat.<sup>16,17</sup> Contamination from hydraulic fracturing is more likely to occur from the improper handling of fluids above ground before the fracturing process, or after the fracturing process when produced liquids are being disposed of. Both of these scenarios can be prevented by simply following accepted industry procedures.

The U.S. House of Representatives Appropriation Conference Committee, in its Fiscal Year 2010 budget report, identified the need for another study of the environmental impacts of hydraulic fracturing. Congress tasked EPA scientists with carrying out the study. The EPA held public comment meetings in various locations around the country from July through September of 2010. The EPA released the first progress report in December of 2012. The progress report largely established the intent and methodological approach of the study, without articulating conclusions. A draft assessment report synthesizing research

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<sup>16</sup> Correspondence, dated May 5, 1995, from Carol M. Browner, Administrator of the United States Environmental Protection Agency, to David A. Ludder, Esq., General Counsel, Legal Environmental Assistance Foundation, Inc.

<sup>17</sup> "Evaluation of Impacts to Underground Sources of Drinking Water by Hydraulic Fracturing," U.S. Environmental Protection Agency, EPA 816-R-04-003, June 2004, Page ES-1.

findings is expected to be released by the EPA in late 2014 for peer review and public comment.

Companies in the oil and gas industry supported the EPA study by providing data for review and analysis. Industry has voluntarily provided additional information from FracFocus, a fracturing chemical registry where well-specific chemical disclosures have been made for over 12,000 wells.<sup>18</sup> Wexpro Company (Wexpro), the production affiliate of Questar Gas, is among the companies voluntarily providing data to FracFocus.

Many in the industry believe that states are in the best position to establish disclosure rules for the chemical components used in hydraulic fracturing fluids rather than federal agencies. The Wyoming Oil and Gas Conservation Commission was the first in the nation to implement a fracturing disclosure rule in 2010. During October of 2012, the Oil, Gas and Mining Board of the State of Utah approved a rule requiring disclosure within 60-days of hydraulically fracturing a well.

### **Wexpro II Agreement and the Trail Unit Acquisition**

For over 30 years, Questar Gas' customers have benefited from supplies delivered at cost-of-service to the Company pursuant to the Wexpro Agreement.<sup>19</sup> Beginning in the fall of 2011, Questar Gas and Wexpro and regulatory agencies in Utah and Wyoming began discussing the possibility of Wexpro acquiring oil and gas properties or undeveloped leases for the mutual benefit of Questar Gas' customers and Wexpro, under an agreement similar to the Wexpro Agreement. This arrangement, referred to as the Wexpro II Agreement, was designed to incorporate essentially the same terms and conditions of the Wexpro Agreement (also referred to now as the Wexpro I Agreement).

On March 28, 2013, the Utah Commission issued its Report and Order approving the Company's Wexpro II Agreement<sup>20</sup> and on October 16, 2013, the Wyoming Commission issued its Order approving the Wexpro II Agreement.<sup>21</sup>

On September 4, 2013, Wexpro acquired an additional 42 percent interest in 72 producing wells in the Trail Unit, an area defined in the Wexpro II Agreement as a Development Drilling Area. On November 5, 2013, Questar Gas filed applications with the Wyoming and Utah Commissions seeking approval to include the Trail Unit Acquisition under the Wexpro II Agreement.<sup>22</sup>

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<sup>18</sup> FracFocus is operated by the Ground Water Protection Council and the Interstate Oil and Gas Compact Commission.

<sup>19</sup> For more information on the Wexpro Agreement, see the Cost-of-Service Gas section of this report.

<sup>20</sup> Utah Public Service Commission, "In the Matter of the Application of Questar Gas Company for Approval of the Wexpro II Agreement," Docket No. 12-057-13, Report and Order, Issued March 28, 2013.

<sup>21</sup> The Public Service Commission of Wyoming, "In the Matter of the Application of Questar Gas Company for Approval of the Wexpro II Agreement," Docket No. 30010-123-GA-12 (Record No. 13347), Memorandum Opinion, Findings and Order Approving the Wexpro II Agreement, Issued October 16, 2013.

<sup>22</sup> Wyoming Commission Docket No. 30010-134-GA-13, filed November 5, 2013. Utah Commission Docket No. 13-057-13, filed November 5, 2013.

On December 24, 2013, the Utah Division of Public Utilities (Division), the Utah Office of Consumer Services (Office), Questar Gas Company, the Wyoming Office of Consumer Advocate and Wexpro Company all agreed to the terms of a Settlement Stipulation.<sup>23</sup>

The Utah Commission held a hearing on the Trail Unit Acquisition on January 8, 2014, and on January 17, 2014 issued a Report and Order approving the Settlement Stipulation allowing the Trail Unit Acquisition to be included under the Wexpro II Agreement.<sup>24</sup> The Wyoming Commission held a hearing on January 27, 2014 and issued a bench order approving the Settlement Stipulation. The Wyoming Commission issued an Order approving the Settlement Stipulation on March 18, 2014.<sup>25</sup> On February 1, 2014, Wexpro recorded \$103.7 million related to the Trail Unit Acquisition as a Wexpro II Property.

The Wexpro II Agreement provides a framework whereby the customers of Questar Gas can continue to receive the long-term benefits of cost-of-service production. Questar Gas is confident that the Wexpro II Agreement, in general, and the Trail Unit Acquisition, in particular, will prove to be valuable to its customers over the long term in Wyoming and Utah.

## **Wyoming IRP Process**

Questar Gas has been involved in integrated resource planning for over two decades in the State of Wyoming. In 1992, the Wyoming Commission ordered the Company to prepare and file integrated resource plans.<sup>26</sup> On February 3, 2009, the Wyoming Commission issued an order initiating a rulemaking pertaining to integrated resource planning. The rule was proposed to “. . . give the Commission a more formalized process for requiring the filing of integrated resource plans, in some cases, and reviewing such plans.”<sup>27</sup> On May 12, 2009, the Wyoming Commission approved Rule 253 and on January 24, 2011 the Wyoming Commission accepted the natural gas IRP guidelines.<sup>28</sup>

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<sup>23</sup> In Utah, the Settlement Stipulation was filed on December 24, 2013 in Docket No. 13-057-13. A Corrected Settlement Stipulation was filed on January 15, 2014, to correct a typographical error. In Wyoming, the Settlement Stipulation was filed on December 23, 2013, in Docket No. 30010-134-GA-13. The Corrected Settlement Stipulation was filed on January 16, 2014.

<sup>24</sup> “In the Matter of the Application of Questar Gas Company for Approval to Include Property Under the Wexpro II Agreement,” Utah Public Service Commission, Docket No. 13-057-13, Report and Order, Issued: January 17, 2014.

<sup>25</sup> “In the Matter of the Application of Questar Gas Company for Approval to Include Property Under the Wexpro II Agreement,” Public Service Commission of Wyoming, Docket No. 30010-134-GA-13 (Record No. 13720), Issued March 18, 2014.

<sup>26</sup> “In the Matter of the Application of Mountain Fuel Supply Company to File its Integrated Resource Plan as Directed by the Commission in Docket No. 30010-GI-90-8,” Findings, Conclusions and Order, Docket No. 30010-GI-91-14, May 21, 1992.

<sup>27</sup> Before the Public Service Commission of Wyoming, “In the Matter of the Proposed Adoption of Chapter 2, Section 253 of the Commission Procedural Rules and Special Regulations Regarding Integrated Resource Planning,” Order Initiating Rulemaking, Docket No. 90000-107-XO-09 (Record No. 12032, February 3, 2009).

<sup>28</sup> Correspondence from the Public Service Commission of Wyoming; Alan B. Minier, Chairman, Steve Oxley, Deputy Chairman, and Kathleen “Cindy” Lewis, Commissioner, To All Wyoming Natural Gas Utilities, dated January 24, 2011.



On June 3, 2013, Questar Gas filed its 2013 IRP with the Wyoming Commission. After affording all interested parties notice and an opportunity to comment, the Wyoming Commission addressed Questar Gas' 2013 IRP in its Open Meeting on September 12, 2013. The Commission Staff recommended that a letter order be issued accepting the Company's IRP for filing. On September 16, 2013, the Wyoming Commission issued a letter order accepting the 2013 IRP for placement in the Commission's files.<sup>29</sup>

On December 6, 2013, the Wyoming Commission held a technical conference to discuss issues related to cost-of-service gas and other related Wexpro II issues.

On March 31, 2014, representatives of Questar Gas met with Wyoming regulatory agencies to make a presentation on and to discuss cybersecurity issues. Due to the need to protect sensitive information, participation in this meeting was limited.

### **Utah IRP Process**

In recent years, the Utah Commission has promulgated new IRP standards and guidelines. This implementation process has included numerous discussions between IRP stakeholders in public meetings and the submission of extensive comments.

On March 31, 2009, the Utah Commission issued its Report and Order on Standards and Guidelines for Questar Gas Company (2009 IRP Standards) to be effective starting with the Company's 2010 IRP.<sup>30</sup> On March 22, 2010, the Utah Commission issued an order clarifying the requirements of the 2009 IRP Standards (Clarification Order).<sup>31</sup>

On May 31, 2013, Questar Gas filed its IRP for the plan year, June 1, 2013 to May 31, 2014. On August 9, 2013, the Division submitted its report and recommendation.<sup>32</sup> Also on August 9, 2013, the Office filed its comments on the 2013 IRP.<sup>33</sup>

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<sup>29</sup> Letter Order, To: Jenniffer R. Nelson, Senior Corporate Counsel, Questar Gas Company, From: Lori L. Brand, Assistant Secretary Wyoming Public Service Commission, Re: IN THE MATTER OF THE APPLICATION OF QUESTAR GAS' INTEGRATED RESOURCE PLAN FOR PLAN YEAR JUNE 1, 2013 TO MAY 31, 2014 – Docket No. 30010-128-GA-13 (Record No. 13563), Issued: September 16, 2013.

<sup>30</sup> "In the Matter of the Revision of Questar Gas Company's Integrated Resource Planning Standards and Guidelines," Report and Order on Standards and Guidelines for Questar Gas Company, Docket No. 08-057-02, Issued: March 31, 2009.

<sup>31</sup> "In the Matter of Questar Gas Company's Integrated Resource Plan for Plan Year: May 1, 2009 to April 30, 2010," Report and Order, Docket No. 09-057-07, Issued: March 22, 2010.

<sup>32</sup> Action Request Response, To: Utah Public Service Commission, From: Division of Public Utilities; Chris Parker, Director, Artie Powell, Manager, Energy Section, Doug Wheelwright, Technical Consultant, Carolyn Roll, Utility Analyst, Subject: Action Request Docket No. 13-057-04, Questar Gas Company 2013-14 Integrated Resource Plan (IRP) Report, Division's Recommendation – Acknowledgement, Date: August 9, 2013.

<sup>33</sup> "Questar Gas Company's 2013 IRP, Docket No. 13-057-04," To: The Public Service Commission of Utah, From: The Office of Consumer Services, Michele Beck, Director, Béla Vastag, Utility Analyst, August 9, 2013.

On October 22, 2013, the Utah Commission issued its Report and Order on the 2013 IRP.<sup>34</sup> The Utah Commission recognized the Company's efforts in preparing the 2013 IRP, managing the IRP process, and addressing Commission guidance from previous Utah Commission orders. The Utah Commission also acknowledged that integrated resource planning is an ongoing process and should be adjusted to reflect changing circumstances. The Utah Commission concluded the 2013 IRP substantially complied with the 2009 IRP Standards.

In its October 22, 2013, Report and Order, the Utah Commission offered guidance for future IRPs. The Commission directed the Company to address the following issues: 1) increasing production levels of cost-of-service gas, 2) the relationship between the need for new capacity and specific projects in the distribution-non-gas (DNG) action plan, 3) the impact of energy efficiency (EE) programs on peak demand, and 4) changes in the amounts of lost-and-unaccounted-for gas.

With regard to the first issue, increasing levels of cost-of-service gas, the Utah Commission directed the Company to respond to four questions: a) What is the maximum manageable percentage of cost-of-service production without excess gas? b) What are the costs of excess cost-of-service gas? c) What percentage of cost-of-service gas causes significant increases in shut-ins? and d) How much cost-of-service gas can feasibly be shut in, how much notice is needed, and what is the cost to ratepayers?

The Office raised these questions during August of 2013, approximately one month before Wexpro acquired the Trail Unit. The Company answered these questions during the ensuing regulatory proceedings which culminated in the Trail Unit Stipulation and the Utah Commission's Order approving the Settlement Stipulation.

In addition to those matters addressed during the Trail Unit Acquisition proceeding, the Company addressed several other matters pertaining to the first issue, cost-of-service gas production. The Utah Commission directed the Company to provide various scenario analyses in its IRP. That analysis involves multiple modeling scenarios with varying percentages of cost-of-service gas and varying demand levels accompanied by the resulting impact on costs and anticipated management actions. This scenario analysis is contained in Appendix A of this report and is discussed further in the Cost-of-Service Gas section.

The Utah Commission also directed the Company to provide an explanation of material changes between the forecasted cost-of-service production used in the most recent 191 Account pass-through filing and the IRP. The Company has provided such information in its most recent pass-through filing and, if needed, the Company will provide any such information in future pass-through filings.

The Utah Commission also encouraged the parties involved in the IRP process to meet with the goal of enhancing understanding of the SENDOUT model and the modeling process including setup, logic and constraints and how cost-of-service gas supplies are

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<sup>34</sup> In the Matter of Questar Gas Company's Integrated Resource Plan for Plan Year: June 1, 2013 to May 31, 2014, The Public Service Commission of Utah, Report and Order, Docket No. 13-057-04, Issued: October 22, 2013.

incorporated. In previous years, Questar Gas modeling experts have made formal presentations in public IRP meetings and have held informal discussions on Company premises. The Company is willing to participate in any such activity at the request of any party to facilitate greater understanding.

With regard to the second issue relating to the relationship between the need for new capacity and specific projects in the DNG action plan including primary drivers for their construction, the Utah Commission observed that this information would be important for the allocation of costs in a general rate case or an infrastructure case. Accordingly, the Utah Commission found that it would be more appropriate for a party to request such information from Questar Gas during rate proceedings.

With regard to the third issue, the Utah Commission directed the Company to schedule discussions on the effect of energy efficiency programs on peak demand and the need for new infrastructure, during an upcoming DSM Advisory Committee meeting and during a public IRP meeting. On March 19, 2013 the DSM Advisory Committee discussed these issues (see the Energy Efficiency Programs section of this report for more detail on this discussion) and interested parties discussed these issues at a public IRP meeting on April 30, 2014. In both meetings the Company explained how the ThermWise<sup>®</sup> programs are not designed to affect the peak hour during the peak day, but are instead designed to reduce overall gas usage.

The fourth and last broad issue concerned lost and unaccounted-for (LAUF) gas. The Utah Commission directed Questar Gas to provide a supplemental filing in the 2013 IRP docket explaining the increase in LAUF gas in the 2013 IRP. The Company did so on November 5, 2013.<sup>35</sup> The Company provided information on LAUF gas on February 25, 2014 in a public IRP meeting in Utah. The Company also provided information related to LAUF gas in the Customer and Gas Demand section of this report.

Over the past year, Questar Gas has scheduled technical conferences and meetings to respond to specific issues as ordered by the Utah Commission, to receive input for the IRP process, and to report on the progress of the Company's planning effort. On February 25, 2014, the Utah Commission held an IRP technical conference in conjunction with the development of the 2014 IRP. The following topics were discussed:

- The 2014 IRP schedule of meetings along with planned discussion topics
- Common causes of LAUF gas in natural gas utilities
- Specific measures taken by Questar Gas to decrease LAUF gas
- The December 5, 2013 weather event in Utah requiring transportation customer reductions in natural gas use
- The nominations time line
- The February 6, 2014 east coast weather event
- The east coast and Rockies regional natural gas price run-up

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<sup>35</sup> "In the Matter of Questar Gas Company's Integrated Resource Plan (IRP) For Plan Year: June 1, 2013 to May 31, 2014," Supplemental Filing Regarding Lost and Unaccounted For Gas, Docket No. 13-057-04, November 5, 2013.

- Questar Gas customers were advantaged by the use of storage and cost-of-service production
- The Wexpro II and the Trail Unit Acquisition Order
- The four questions regarding cost-of-service gas
- How the IRP Quarterly Variance Report will report changes
- How other potential Wexpro II properties may be available in the current price environment

On March 3, 2014, Questar Gas sent the annual request for proposals (RFP) for purchased gas to potential suppliers. The deadline for responses to the RFP was March 14, 2014.

The Utah Commission held a technical conference on April 2, 2013, with Utah regulatory agencies. The attendees discussed the following topics:

- Master planning of the system
- Gas Control coordination
- The Monticello event on October 31, 2013

On April 30, 2013, Utah regulatory agencies met to discuss the following topics and related confidential information:

- Demand and peak day forecast
- Clean air
- Impact of EE programs on peak demand
- The Lake Side II update
- Heating season review
- Review of the Questar Gas 2014 RFP for purchased gas

A public meeting has been planned for June 25, 2014, to discuss the 2014 IRP with Utah regulatory agencies and interested stakeholders.

Over the previous year, the Company has participated in a number of Utah IRP meetings to address specific issues as ordered by the Utah Commission. The Company welcomes discussion and open dialogue and will schedule additional technical conferences to answer questions and resolve any remaining issues.

During the course of the IRP process, Questar Gas has maintained four main goals and objectives:

1. To project future customer requirements;
2. To analyze alternatives for meeting customer requirements from a distribution system standpoint, an upstream capacity standpoint, a gas-supply source standpoint and taking into consideration the inter-day load profile of each source;

3. To develop a plan using stochastic data, stochastic methods, and risk management programs that will provide customers with the most reasonable costs over the long term that are consistent with reliable service, stable prices, and are within the constraints of the physical system and available gas supply resources; and
4. To use the guidelines derived from the IRP process as a basis for creating a flexible framework for guiding day-to-day, as well as longer-term gas supply decisions, including decisions associated with cost-of-service gas, purchased gas, gathering, processing, upstream transportation, and storage.

The Company utilizes a number of models as part of its IRP processes. The complexity of the systems being analyzed necessitates the use of computer-based tools. Modeling tools are an integral part of the forecasting, gas network analysis, energy-efficiency analysis, and resource selection processes. In each section of this report where the Company has referred to modeling tools, the IRP contains a description of the functions of each model and the version utilized. The IRP also contains discussion of any material changes (logic and data) from the previous year's IRP including the reasons for those changes.

An annual IRP process dovetails well with the natural seasonal cycles of the gas industry. Some of the end-of-calendar-year data is not available and fully analyzed for IRP purposes until mid-April. The utilization of this information ensures that the Company is including the most current and relevant information in its IRP. The required data input assumptions utilized in IRP models are voluminous. Nevertheless, the intent of this IRP is to summarize, in a readable fashion, the Company's planning processes.