- BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH –

In the Matter of Questar Gas Company's Integrated Resource Plan (IRP) for Plan Year: June 1, 2015 to May 31, 2016	DOCKET NO. 15-057-07 REPORT AND ORDER

ISSUED: October 22, 2015

SHORT TITLE

Questar Gas Company 2015 Integrated Resource Plan

SYNOPSIS

The Commission determines Questar Gas Company's 2015 Integrated Resource Plan substantially complies with the requirements of the 2009 Standards and Guidelines. The Commission requests Questar Gas Company provide additional information in its 2016 Integrated Resource Plan on heat pumps and on the effect of energy efficiency on peak day demand.

PROCEDURAL HISTORY

On June 8, 2015, Questar Gas Company ("Questar," "Questar Gas," or "Company") filed its Integrated Resource Plan ("IRP") for the period of June 1, 2015, through May 31, 2016 ("2015 IRP"), with the Public Service Commission of Utah ("Commission"). The 2015 IRP was submitted in accordance with the 2009 Integrated Resource Planning Standards and Guidelines presented in the Commission's March 31, 2009, Report and Order on Standards and Guidelines for Questar Gas Company in Docket No. 08-057-02 ("2009 Standards and Guidelines").[1]

[1] *See In the Matter of the Revision of Questar Gas Company's Integrated Resource Planning Standards and Guidelines*, Docket No. 08-057-02 (Report and Order; March 31, 2009).

On June 10, 2015, the Commission issued a notice of scheduling and technical conferences to be held on June 24, 2015. On June 24, 2015, following completion of the noticed scheduling and technical conferences, the Commission issued a scheduling order inviting parties to review and provide comments and reply comments on the 2015 IRP by August 14 and September 30, 2015, respectively. On August 12 and 13, 2015, the Office of Consumer Services ("Office") and the Division of Public Utilities ("Division"), respectively, filed comments on the 2015 IRP. No party filed reply comments.

SUMMARY OF THE 2015 IRP AND THE PLANNING PROCESS

The 2015 IRP presents Questar's annual forecasts, summaries of system and gas modeling activities, and resource selection results. The 2015 IRP also includes a discussion of regulatory, resource, and operational challenges which Questar Gas faced during the previous year or could face in the future. Forecasts include annual temperature-adjusted system sales and throughput, system firm peak design-day gas demand, residential usage per customer, and the number of customer additions. Questar uses the forecast information, along with other operational data, to evaluate gas supply needs and system infrastructure requirements. Questar also uses these forecasts to inform the development of its annual natural gas request for proposals ("RFP") for base load and peaking gas supplies.

In conformance with the 2009 Standards and Guidelines, Questar's 2015 IRP includes an executive summary, modeling results, a distribution infrastructure/facilities action plan (otherwise known as a distribution non-gas ("DNG") action plan), and general guidelines. These components are supported by the following specific sections and associated exhibits within the 2015 IRP: Introduction and background, customer and demand forecasts, system capabilities and

constraints, purchased gas, cost-of-service gas ("COS gas"), gathering/transportation/storage, energy efficiency ("EE") programs, and final modeling results.

In conjunction with the development of the 2015 IRP, Questar conducted public meetings on February 9, March 25, and May 4, 2015. Topics addressed during these meetings included various weather/outage events and their effects on Questar's system, follow-up items from the Commission's 2014 IRP Report and Order,[2] Questar's demand forecast and the 65 percent COS gas production limit calculation associated with the Trail Unit Settlement Stipulation,[3] review and update of upstream transportation and storage contracts, 2014-2015 heating season review, management of COS gas during the 2014 IRP year, and review of Questar's 2015 RFP for purchased gas.

During the May 4th meeting Questar presented market-sensitive information addressing the recently-issued RFP to participants subject to non-disclosure obligations. Finally, a technical conference was held on June 24, 2015, to discuss the recently-filed 2015 IRP. These meetings were attended by representatives of the Commission, Division, Office, and other interested organizations.

As in previous IRPs, Questar Gas identifies the following goals and objectives in the 2015 IRP: 1) to project future customer requirements; 2) to analyze alternatives for meeting customer requirements from the standpoints of the distribution system, upstream capacity, and gas-supply source taking into consideration the inter-day load profile of each source; 3) to

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[2] *See In the Matter of Questar Gas Company's Integrated Resource Plan (IRP) for Plan Year: June 1, 2014 to May 31, 2015*, Docket No. 14-057-15 (Report and Order; October 8, 2014) ("2014 IRP Order").

3 *See In the Matter of the Application of Questar Gas Company for Approval to Include Property Under the Wexpro II Agreement*, Docket No. 13-057-13 (Report and Order; January 17, 2014).

develop a plan using stochastic data and methods, and risk management programs, that will provide customers with the most reasonable costs over the long term consistent with reliable service and stable prices 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 those associated with COS gas, purchased gas, gathering, processing, upstream transportation, and storage.

The following tables summarize price in dollars per decatherm ("Dth"), sales, peak demand, throughput, and usage per customer information provided in the 2015 IRP. For comparison, historic information is provided when available.

Table 1. Price[4] ($/Dth) (IRP, Page 5-1)

Historic First of Month Index Price for Natural Gas on Questar Pipeline	2015 IRP	2014 IRP
Annual average price	2014: $4.25	2013: $3.47
Heating season average price	2014-2015: $3.21	2013-2014: $4.31

Table 2. Sales (million Dth)

Annual System Sales	2015 IRP Forecast 2015/16-2024/25	2014 IRP Forecast 2014-2024	2014 Actual
Temperature-adjusted sales	113.1 – 125.2[5]	112.2 – 127.2	114.6
Actual sales			102

[4] In the 2015 IRP Questar changed its First-of-Month ("FOM") index price reference from Questar Pipeline to Northwest Pipeline. During the June 24 Technical Conference Questar explained that there was not enough trading volume on the Questar Pipeline FOM index price so this index is no longer published. Questar stated the Northwest Pipeline index is now a better indication of price.

[5] The projections contained in the IRP reflect the temperature and elevation compensation approved by the Commission in Docket No. 09-057-16, *In the Matter of the Application of Questar Gas Company to Increase Distribution Non-Gas Rate and Charges and Make Tariff Modifications* (Report and Order, June 3, 2010).

Table 3. Peak Demand (million Dth/day)

Peak Demand at the City Gate	2015 IRP Forecast Heating Season 2015-2016	2014 IRP Forecast Heating Season 2014-2015	Actual Heating Season 2014-2015
Total	1.694	1.652	1.272
Firm Sales	1.306	1.286	0.996
Transportation	0.388	0.366	0.276

Table 4. System Throughput (million Dth)

System Throughput	2015 IRP Forecast 2014/15-2024/25	2014 IRP Forecast 2014-2024	2014 Actual
Temperature-adjusted system throughput	193.0 – 212.0[6]	195.0 – 218.0	196.2
Actual system throughput			184

Table 5. Usage per Customer (Dth)

Temperature Adjusted Average Usage per Customer	2015 IRP Forecast 2015/16-2024/25	2014 IRP Forecast 2014-2024	2014 Actual
System-wide General Service ("GS")			111.1
Utah GS	106.9 – 97.6	108.4 – 98.5	
Utah Residential GS	80.6 – 72.4	81.8 – 73.6	83.47
Utah Commercial GS	458.4 – 437.9	464.0 – 438.7	470.05

Table 6. Natural Gas Supply Requirements (million Dth)

Natural Gas Requirement	2015 IRP Forecast June 2015 – May 2016	2014 IRP Forecast June 2014 – May 2015
Total	138.7	128.2
Cost-of-Service Gas	66.2	72.0
Purchased Gas	57.6	43.2
Other (off system and storage)	14.9	13.0

The 2015 IRP states that, as a result of the forecasted level of COS gas in its supply portfolio, from October 2014 through March 2015 Questar Gas did not hedge the price of any of

[6] Questar's current forecast includes anticipated throughput for electricity generation plants fueled by natural gas.

its base-load purchased gas supplies. Further, Questar states that, due to the current forecast of COS gas production, it has no plans to enter into any fixed-price agreements during the 2015 IRP year. Questar will review this issue annually to determine whether price stabilization measures are appropriate in the future. Questar mentions that the average of the PIRA Energy Group and Cambridge Energy Research Association's forecasts of the Rockies indices reflect an average price for the 2015-2016 heating season of $2.82 per Dth. The 2015 IRP also indicates that annual demand for electric generation customers increased substantially in 2014 due to the completion of the Lake Side Power Plant extension. Questar forecasts a leveling off of this demand at about 43 million Dths per year.

In Chapter 6 Questar provides information on production shut-ins. Table 6.1 presents the level of forecast and actual COS production shut-in amounts in Dth/day for June through October 2014, for a total of 2.388 Dths forecast versus 2.944 million Dths actually shut-in. The forecast level of COS production shut-in amounts for June through October 2015 is 0.508 million. In Section 11 of the 2015 IRP Questar presents a scenario analysis of the 2015 forecast by varying the forecasted amount of COS gas and demand by plus or minus 10 percent, and an estimate of their associated effect on the overall cost of gas supply.

Chapter 8 of the 2015 IRP provides the results of Questar's 2014 EE programs and a summary of its 2015 EE plan.[7] Questar reports EE rebate dollars accounted for approximately 78 percent of the EE spending of $26.3 million in 2014. In addition, the 2014 program resulted in

[7] Questar's 2015 Energy Efficiency Plan was approved by the Commission in Docket No. 14-057-25, *In the Matter of the Application of Questar Gas Company for Approval of the 2015 Year Budget for Energy Efficiency Programs and Market Transformation Initiative* (Report and Order; December 10, 2014).

annual natural gas savings of more than 600,000 Dth and a total actual net benefit cost ratio of 0.99 based on the total resource cost test. Questar states the actual benefit/cost results for 2014 were lower than the corresponding budget projection primarily due to two reasons. Questar explains the program experienced higher than expected participation in lower-savings energy efficiency measures. In addition, the actual benefit/cost evaluation used lower than forecasted avoided natural gas costs than were used in cost-effectiveness modeling for the 2014 EE Plan budget.

In Chapter 10 Questar indicates it used a new version of the SENDOUT modeling software, Version 14.3, to develop the 2015 IRP. In addition, Questar lists the modifications it made to the SENDOUT model including one affecting constraints at Clay Basin during extreme cold-weather events and low-inventory conditions. Using the SENDOUT model, Questar estimates a first-year, normal case system gas cost of $673 million.

Also of note in the 2015 IRP, Questar: 1) continues to provide a section on full fuel-cycle efficiency; 2) states it utilized No Notice Transportation service every day throughout the 2014-2015 heating season (representing 98 days for reduction of nominations to the city gate by reducing withdrawals or increasing injections and 53 days to provide for additional storage withdrawal or reduce injections); 3) forecasts an average transmission integrity management ("IM") cost of about $5.2 million per year from 2015 through 2017, similar to that presented in the 2014 IRP; 4) forecasts an average distribution IM cost of about $1.3 million per year from 2015 through 2016, similar to that presented in the 2014 IRP; 5) mentions the Federal Energy Regulatory Commission's notice of proposed rulemaking on "Coordination of the Scheduling Processes of Interstate Natural Gas Pipelines and Public Utilities;" 6) includes a section on

intermediate high pressure projects; 7) includes Table 2.1 showing the annualized gas-gallon equivalents at its compressed natural gas stations increased 4.8 percent in 2014; 8) states that on February 1, 2014, Wexpro recorded $103.7 million as a Wexpro Property and that on December 19, 2014, Questar Corporation announced Wexpro had acquired an additional interest in the Canyon Creek Unit for approximately $52.5 million; and 9) provides an update on its acquisition of the Eagle Mountain municipal gas system in February 2015 in which approximately 6,500 new customers were added to its system.

COMMENTS

The Division's comments provide: 1) a summary of the results of the 2015 IRP; 2) historical information on the IRP process gas commodity and gathering rates, and gas transportation and storage issues; 3) a discussion of Questar's hedging program, variance reports, and gas quality issues; and 4) a brief summary of Questar's IM obligations under the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration's rule addressing IM programs for gas distribution pipelines.

The Division also provides a history of Questar's EE activities. The Division notes that Questar reported a deemed savings of 600,190 Dth (compared to 637,349 Dth saved in 2013) and a net benefit cost ratio of 1.0 for its 2014 EE programs. The Division confirmed Questar continued the discussion of the effects of the EE programs on peak day as recommended in the Commission's 2014 IRP Order. The Division explains Questar's Energy Comparison Report and indicates Questar's intention to move this report from the Market Transformation Initiative to a stand-alone program in 2015.

The Division briefly summarizes some of Questar's expansion and replacement projects, particularly the Charleston Feeder Line Project, the Salt Lake Belt Line Replacement project, the Moab and Vernal pipe replacement projects, the WG0003 Regulator Station project intended to improve intermediate high pressure system pressures in St. George, and replacement of Feeder Lines 6, 24, 26, and 34. The Division also mentions Questar's work with Transportation Service customers and their agents to improve the nominations process.

The Division states Questar Gas responded to the issues raised in the Commission's 2014 IRP Order. The Division believes Questar Gas has made reasonable attempts to satisfy the 2009 IRP Standards and Guidelines and has also committed, through continuing discussions with parties, to continue to improve on details of some aspects presented in this IRP. The Division recommends the Commission acknowledge the 2015 IRP.

The Office commends Questar on the information provided in the 2015 IRP and recommends the Commission acknowledge it. The Office provides a comparison of Questar's IRP annual demand forecast with the weather-normalized actual demand and comments on Questar's efforts in helping parties understand this issue as it relates to the Trail Unit Stipulation. The Office also comments on two aspects of the 2015 IRP pertaining to demand side management (DSM) impact on peak demand, and air and ground source heat pumps ("Heat Pumps").

As with the 2013 and 2014 IRPs, the Office provides observations and recommendations pertaining to the relationship of Questar's EE programs and peak demand. The Office acknowledges that Questar discussed these issues during a DSM Advisory Group meeting and an IRP workshop as ordered by the Commission. The Office recommends Questar should continue

to monitor, study, and report on the impacts of DSM programs on the peak day. Further, the Office recommends that if the impacts of the DSM programs are material, they should be incorporated into the DSM cost benefit test.

The Office also points out that on Pages 3-9 and 3-10 of the 2015 IRP Questar discusses Heat Pumps and associated risks including their effect on peak demand and cross-subsidy issues. The Office believes it is now appropriate for Questar to undertake a more formal study of Heat Pumps and recommends the Commission require Questar to present additional information on Heat Pumps in the 2016 IRP. This information should include:

- An overview of how Heat Pumps are used in space and water heating, including an overview of both residential and commercial applications;
- A description of what temperatures result in efficient use of the Heat Pumps and what temperatures require a switch back to the natural gas appliances;
- A specific explanation of how the operations of Heat Pumps have the potential to impact the Company's peak demand and any associated infrastructure and gas management challenges; and
- A study demonstrating potential cost recovery and cross subsidies associated with Heat Pump customers.

DISCUSSION, CONCLUSIONS, AND GUIDANCE

We continue to recognize Questar's efforts in preparing its annual IRP, managing the IRP process, and addressing Commission guidance from previous IRP orders. These efforts, as reflected in the comments provided by the Division and the Office, ensure Questar's annual IRP provides timely, valuable information on its plans for, and challenges in, meeting present and

future responsibilities as a public utility. We also recognize integrated resource planning is an ongoing process and should be adjusted to reflect changing circumstances. We particularly appreciate Questar's presentation of additional information in Exhibit B to Questar's Fourth Quarter Variance Report for the 2014 IRP and at the various 2015 IRP-related meetings.

The Division's analysis of the 2015 IRP addresses procedural, reporting, and informational requirements. The Division concludes the Questar Gas 2015 IRP substantially complies with the 2009 Standards and Guidelines and improves on some aspects of previous IRPs; therefore the Division recommends the Commission acknowledge Questar's 2015 IRP. The Office also recommends the Commission acknowledge the 2015 IRP. Based upon our review of the 2015 IRP and the comments from the Division and the Office, we agree with the Division's assessment that Questar's 2015 IRP substantially complies with the requirements of the 2009 Standards and Guidelines**.**

We find the Office's recommendations pertaining to Heat Pumps and the effect of EE programs on the peak demand reasonable and request Questar to provide additional information on these issues as suggested by the Office.

ORDER

1. We acknowledge the 2015 IRP as filed substantially complies with the requirements of the 2009 Standards and Guidelines.
2. Questar shall address Heat Pumps and the impacts of EE programs on peak demand as discussed above in its 2016 IRP.

DATED at Salt Lake City, Utah, this 22nd day of October, 2015.

/s/ Thad LeVar, Chair

/s/ David R. Clark, Commissioner

/s/ Jordan A. White, Commissioner

Attest:

/s/ Gary L. Widerburg
Commission Secretary
DW#270101

CERTIFICATE OF SERVICE

I CERTIFY that on the 22nd day of October, 2015, a true and correct copy of the foregoing was served upon the following as indicated below:

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