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DEPARTMENT OF COMMERCE
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To: The Public Service Commission of Utah&it st
From: The Office of Consumer Services
Michele Beck, Director
Danny A.C. Martinez, Utility Analyst
Date: August 12, 2015
Subject: Questar Gas Company's 2015 IRP, Docket No. 15-057-07

INTRODUCTION

On June 8, 2015, Questar Gas Company ("QGC" or "Company") filed its 2015 Integrated Resource Plan ("IRP") for the planning period June 1, 2015 to May 31, 2016. On June 10, 2015, the Utah Public Service Commission ("Commission") issued a scheduling order which set a deadline of August 14, 2014 for parties to file initial comments on the IRP in this proceeding.

The Office of Consumer Services ("Office") submits these comments to the Commission regarding the Company's 2015 IRP.

COMMENTS

Demand Side Management (DSM) Impact on Peak Demand

The Company has reviewed the impacts of DSM on peak demand and infrastructure. After meetings with the DSM Advisory Group and IRP technical conferences, the Company explained in the IRP:

"The Company expanded on the 2014 discussions of this topic by explaining that some rebate-eligible equipment has little impact on peak-hour usage (either by reducing or increasing), but over the entire peak day, usage should be reduced by installing energy-

efficient equipment. The Company further agreed in both 2015 meetings to continue study of this topic in the future.”

The Office agrees that this topic requires further study and discussion as the Company indicated in the IRP. For two years, parties have identified and discussed the issue of DSM impacts on peak day. The Office recommends that the Company should continue to monitor, study, and report on the impacts of DSM programs on the peak day. If the peak day impacts are material, those impacts should be incorporated into DSM cost benefit tests.

Air & Ground Source Heat Pumps and Demand Impacts

On pages 3-9 and 3-10 of the IRP, the Company discusses the impacts of ground and air source heat pumps. The Company has used the same language in the past two IRPs. The Company claims that these heat pumps may cause “significant risks to the Company and its customers if these devices proliferate.” However, the IRP does not include any study or documented analysis supporting the specific impact of these heat pumps. The Company outlines two risks that these heat pumps have to the Company’s system.

The Company states the first risk as follows: “The first risk arises because these customers will increase the peak demand on the system. This risk is especially troubling because it will be very difficult to estimate the additional peak requirement created by these customers.”¹ In this context “these customers” references electric customers who utilize ground or air source heat pumps for part of their space and water heating needs. The Office agrees with the Company’s concern about unpredictability of peak demand on the system and asserts that this issue has potential infrastructure implications and requires study to understand how these appliances will impact the system.

The second risk deals with cost recovery from heat pump customers and cross subsidies. The Company indicates concern that the current rate design will not recover the portion of the cost to serve heat pump customers requiring other customers to make up the difference. The Office believes it is inadequate for the Company to raise potential concerns of cost recovery without providing additional supporting information. The Company should provide detail of which class (or classes or subset of classes) it believes might end up subsidizing the heat pump customers and specifically how it believes current rate design is inadequate so that impacted stakeholders can begin to work on potential solutions, if necessary. The Office also recommends that the

¹ 2015 IRP, p. 3-9.

Company become more engaged with other proceedings (i.e. electric DSM) in which heat pumps are at issue.

The Office notes that this Commission has received applications for approval of heat pumps in electric DSM programs². The Office has raised concerns in those dockets, although Questar has not chosen to participate. The Office recommends that the time is now ripe for the Company to undertake a more formal study of the peak day impacts caused by heat pumps. It would be helpful for the Commission and other parties to have a better understanding of the operations of these appliances and the potential impacts on the natural gas system. The types of information that the Company should provide include:

- An overview of how air and ground source 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.
- A study demonstrating potential cost recovery and cross subsidies associated with heat pump customers.

IRP Forecast and its significance under the Trail Stipulation

On page 6-1, the IRP states, "In calculating the production percentage, pursuant to the Trail Stipulation, the total wellhead volume of cost-of-service production received as part of the Wexpro I and Wexpro II Agreements will be divided by the total forecasted demand for Questar Gas Sales Customers as provided in each year's IRP." During this year's IRP technical conferences, the Company explained the COS calculation in detail clarifying that the gas supply component of the calculation includes LAUF gas and off system gas resolving concerns raised in the last year's IRP.

² Based on opposition from the Office, the Commission rejected incentives for air source heat pumps where a natural gas service line is installed; incentives are available for air source heat pumps in locations without available natural gas.

The Office notes that the annual demand forecast becomes extremely important in this calculation. The Office analyzed the accuracy of these forecasts by comparing forecast demand with weather normalized actual demand and measuring the percentage differences. The table below shows these results:

Year	Forecast	Temp Adj	% Diff
2001	97.6	96.8	-0.82%
2002	97.6	97.4	-0.20%
2003	98.3	100	1.73%
2004	100	99.9	-0.10%
2005	104.4	104.5	0.10%
2006	103.5	107	3.38%
2007	105.2	103.6	-1.52%
2008	104.3	108	3.55%
2009	107.5	106.6	-0.84%
2010	106.4	106.9	0.47%
2011	109.2	112.5	3.02%
2012	111	111.1	0.09%
2013	110	111.2	1.09%
2014	112.2	114.6	2.14%
2015	113.1		

Annual demand forecasts from 2001 to 2014 have been accurate with an average percentage difference of 0.86% ranging from -1.52% to 3.55%. The Office commends the Company's efforts to help parties understand the COS production calculation in this year's IRP and forecast accuracy.

SUMMARY AND RECOMMENDATIONS

In summary, the Office commends the Company on the information provided in the IRP and recommends the Commission acknowledge the Company's 2015 IRP. The Company has demonstrated accuracy in its annual demand forecasts over the past 14 years with an average deviation of 0.86%.

The Office recommends that the Commission require the Company to continue to monitor the impact, if any, of DSM programs on peak day usage and report its results in future IRPs.

Finally, the Office recommends that the Commission require the Company to include additional information about heat pumps in its next IRP. This should include:

- An overview of how air and ground source 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.
- A study demonstrating potential cost recovery and cross subsidies associated with heat pump customers.