

CUSTOMER AND GAS DEMAND FORECAST

System Total Temperature-Adjusted Dth Sales and Throughput Comparison – 2010 IRP and Actual Results for 2010

On a weather normalized basis, Questar Gas' actual natural gas sales during 2010 totaled 106.9 million Dth. This compares with the 106.4 million Dth that were projected in last year's IRP. Actual average usage per Utah General Service (GS) customer on an annual basis declined to 106.8 Dth compared to last year's base case forecast of 106.7 Dth.

Temperature-adjusted system throughput (Dth sales plus Dth transported) was 166.3 million Dth in 2010 compared to last year's IRP forecast of 168.0 million Dth for the same period.

Customer additions are expected to remain low through 2012 as demand for new residential and commercial construction is restrained by lingering effects of the recession. Usage per customer within the GS class will continue to decline as new, more energy-efficient structures are built and as customers continue to reduce consumption through efficiency improvements. Non-GS commercial and industrial consumption will grow modestly with the pace of economic recovery. Transportation for electric generation will increase moderately through 2013 and then increase substantially in 2014 and beyond with a significant expansion of a major power plant.

Temperature-Adjusted Dth Sales and Throughput Summary – 2011 IRP

This year's forecast of system sales is anticipated to increase from 109.2 million Dth in 2011 to 123.0 million Dth in 2021 (see Exhibit 3.10). Unlike last year's projection, this projection incorporates the temperature and elevation compensation that was ordered by the Commission in April of 2010.

The new forecast projects 1,168,743 (Exhibit 3.1) system GS customers by the end of 2021, with annual Utah GS usage per customer at 97.1 Dth (Exhibit 3.2) and annual Wyoming GS usage per customer at 106.8 Dth (Exhibit 3.5). The annual usage per Utah residential customer is projected to be 71.5 Dth (Exhibit 3.3) at the end of 2021, and average annual usage per Utah GS commercial customer is expected to be 435.3 Dth by the end of 2021 (Exhibit 3.4). The annual usage per Wyoming residential customer is projected to be at 70.5 Dth at the end of 2021 (Exhibit 3.6), and annual usage per Wyoming commercial customer is projected to be at 406.6 (Exhibit 3.7) Dth for the same period.

System throughput in this year's forecast is expected to increase from 170.0 million Dth in 2010 to 223.6 million Dth in 2021 (Exhibit 3.10). The current forecast includes the anticipated throughput for existing electric generation customers.

Residential Usage and Customer Additions

Utah

Utah residential GS customer additions in 2010 totaled 9,521, a modest increase of 988 additions from 2009. Expectations of modest improvement in residential construction result in a forecast of about 10,365 residential customer additions in 2011 and 11,498 in 2012. Expected improvements in economic conditions will accelerate additions in 2013, and by 2014 the rate of annual additions is expected to return to pre-recession levels of over 20,000 customers.

Actual temperature-adjusted residential usage per customer for the twelve months ending December 2010 was 80.8 Dth, a decrease of 1.4 Dth from the year-ending 2009. Adjusting for temperature and elevation compensation in Dth computation, residential usage per customer at the end of 2011 is expected to be 81.1 Dth, a decrease of 1.4 Dth from the adjusted year-end usage for 2010 (see Exhibit 3.3).

The primary modeling tool for residential usage is an end-use model that estimates consumption for space heat, water heating, and other gas appliance use based on appliance efficiency and housing characteristics. The model incorporates estimates of housing characteristics, natural gas appliance saturation by efficiency rating throughout the residential customer base, customer growth projections, and projected changes in economic variables that affect use per customer such as the average residential gas bill and household income. Effects on use per customer from the company's energy efficiency programs based on past and projected participation levels have also been addressed in the model. Along with the end-use model, statistical time series projections are also utilized in the forecasting process.

Wyoming

Wyoming residential GS customers increased by 368 in 2010, ten fewer than the prior year's additions. Economic conditions restraining the demand for new construction are expected to persist through most of 2011, and the forecast of customer additions reflects this slowdown with about 286 additions expected in 2011. Anticipation of a gradual recovery will drive customer additions above 400 in 2012 and above 500 in 2013.

Wyoming residential annual usage per customer was 85.1 Dth at the end of 2010. As in Utah, a general trend toward greater housing and appliance efficiency accelerated by participation in the energy efficiency programs is expected to drive an overall decline in usage per customer through the forecasted period. Usage per customer is expected to be 83.55 at the end of 2011 (see Exhibit 3.6).

Small Commercial Usage and Customer Additions

Utah

The projection of usage per commercial GS customer and customer additions is primarily driven by residential customer growth and class historical trends. Temperature-adjusted Utah GS commercial usage per customer for the twelve months ended December 2010 was 450.2 Dth. Adjusting for temperature and elevation in the Dth computation, this year's forecast reflects a continuation of a general downward trend with average usage projected at 457.0 Dth at the end of 2011 and 455.8 Dth at the end of 2012 (see Exhibit 3.4).

Utah GS commercial customer additions are expected to change in direct proportion to the changes in Utah GS residential customer additions. Historically, the relationship of commercial customers to residential customers has remained stable. As we add residential customers, commercial customers are added to provide services to them. It is anticipated that approximately 830 customers will be added in 2011. The rate of annual additions will follow residential customer additions and gradually increase to 1,300 additions and above per year from 2013 on.

Wyoming

Usage for commercial GS customers in Wyoming for the twelve months ending December 2010 was 441.1 Dth. Usage per customer for year-end 2011 is forecasted to be 437.9 Dth and is projected to continue a general decline through the forecast period.

During 2010, 22 commercial GS customers were added – down from 43 additions from the prior year. This reflects the general slowdown in commercial construction. The forecast projects about 50 additions in 2011 and a gradual increase to roughly 60 additions in 2013 as economic conditions improve. As with Utah, these projections are driven primarily by residential customer increases.

Large Commercial, Industrial and Electric Generation Gas Demand

As shown in Exhibit 3.8 annual gas demand among large commercial and industrial customers will gradually increase with the anticipated pace of economic recovery. Demand is expected to grow from 44.7 million Dth in 2011 to 47.0 million Dth in 2021.

Annual demand among electric generation customers is projected to grow moderately through 2013 and then increase substantially beginning in 2014 with the completion of the significant expansion of a major power plant.

Firm Customer Design-Day Gas Demand

As in prior years, the design-day demand projections are based on a one-in-twenty year (five occurrences in 100 years) weather event. More specifically, the design-day firm customer gas demand projection is based on a theoretical day where the mean temperature is –5 degrees Fahrenheit at the Salt Lake Airport weather station and correspondingly design-day temperatures are seen coincidentally across the Company’s service territory.

Several factors are statistically significant in predicting daily gas deliveries during the winter heating season including: wind speed; average December, January and February Utah GS sales; and prior days’ temperatures and sales. The design-day demand projections distinguish between firm sales customers and firm transportation customers for gas supply and system capacity planning purposes.

As shown in Exhibit 3.9, the firm sales and firm transportation for the years 2007-2011 reflect highest deliveries for a single day during the heating season. The deliveries do not reflect anticipated peak conditions. The firm customer design-day gas supply projection for the 2011-2012 heating season is 1.281 million Dth. The design-day projection grows to a level of 1.429 million Dth in the winter of 2020-2021.

Periods of Interruption

Under peak-day conditions it is estimated that potentially 125,000 Dth, system wide, could be interrupted (117,000 Dth of interruptible transportation and 8,000 Dth of interruptible sales).

The Utah Questar Gas Tariff states, “At times there may be a need for interruption on an isolated portion of the Company’s system.” In 2009 the Company performed an analysis and determined that isolation of certain system segments could alleviate pressure concerns while limiting the impact on customers that are neither affected by nor can affect pressures on that segment. Questar Gas will utilize this information in determining which customers need to be interrupted and to limit the impact of interruptions on other customers.

The Company is continually working to improve its interruption processes to ensure the reliability of service while also limiting the impact upon interruptible customers.

Source Data

Where available, the Company has obtained economic, demographic and other data from state and local sources such as the University of Utah (Bureau of Economic and Business Research) and the Utah Governor’s Office of Planning and Budget. Where

local data was not available, nationally recognized sources such as the U.S. Energy Information Administration, the U.S. Census Bureau and IHS Global Insight were used.

The Utah and Wyoming Economic Outlook

Below is a review of recent history and the current economic outlook:

Summary of Utah Economy Annual Percentage Change

Description	2005 – 2010	2010 - 2011	2010 - 2015	2010 – 2018
Population	2.3%	1.9%	2.1%	2.1%
Personal Income	4.7%	5.8%	5.7%	5.5%
Construction Employment	-4.4%	2.0%	10.5%	7.8%
Manufacturing Employment	-1.2%	2.5%	1.5%	1.5%
Non-Manufacturing Employment	0.8%	1.9%	2.6%	2.3%
Total Employment	0.6%	2.0%	2.5%	2.2%
Average Single-Family & Multi-Family Dwelling units	16,827	8,262	15,987	19,083

Source: Based on Spring, 2011 long-term forecasts by IHS Global Insights.

Summary of Wyoming Economy Annual Percentage Change

Description	2005 – 2010	2010 - 2011	2010 - 2015	2010 – 2018
Population	2.0%	1.6%	1.0%	0.8%
Personal Income	6.2%	5.6%	5.0%	5.0%
Construction Employment	1.7%	0.5%	4.2%	3.5%
Manufacturing Employment	-2.2%	3.1%	1.4%	1.0%
Non-Manufacturing Employment	1.5%	1.2%	1.3%	1.1%
Total Employment	1.4%	1.2%	1.3%	1.1%

Source: Based on Spring, 2011 long-term forecasts by IHS Global Insights.

The U.S. Economic Outlook

Below is a review of recent history and the consensus economic outlook:

U.S. MACROECONOMIC FORECAST							
Source: HIS GLOBAL INSIGHT Review of the U.S. Economy – April, 2011							
	Forecast						
	2005	2006	2007	2008	2009	2010	2011
Real Gross Domestic Product ^{1/}	3.1	2.7	1.9	0.0	-2.6	2.9	2.7
GDP Price Index - Chain Wt. ^{1/}	3.3	3.3	2.9	2.2	0.9	1.0	1.7
CPIU ^{1/}	3.4	3.2	2.9	3.8	-0.3	1.6	3.0
Real Disposable Income ^{1/}	1.3	4.0	2.3	1.7	0.6	1.4	2.2

Pre-tax Profits <u>1/</u>	16.8	10.5	-6.1	-16.4	-0.4	29.2	5.2
Unemployment Rate <u>3/</u>	5.1	4.6	4.6	5.8	9.3	9.6	8.8
Housing Starts <u>4/</u>	2.1	1.8	1.3	0.9	0.6	0.6	0.6
3-month Treasury Bills <u>3/</u>	3.1	4.7	4.4	1.4	0.2	0.1	0.2
30-Year Fixed Mortgage Rate <u>3/</u>	5.9	6.4	6.3	6.0	5.0	4.7	4.9
Trade Balance <u>2/</u>	-748	-803	-718	-669	-378	-470	-584
Vehicle Sales – Total <u>4/</u>	17.0	16.5	16.1	13.2	10.4	11.6	12.7
Real Non-Res Fixed Investment <u>1/</u>	6.7	7.9	6.7	0.3	-17.1	5.7	8.3
Industrial Production <u>1/</u>	3.2	2.2	2.7	-3.7	-11.2	5.3	5.3

- 1/ Annual Rate of Change (Percent)
2/ Billions of 1996 chained dollars
3/ Percent
4/ Million Units

Long-term U.S. Economic Outlook

Source: GLOBAL INSIGHT Review of the U.S. Economy – April, 2010

	2012	2013	2014	2015	2016	2017	2018
Real Gross Domestic Product <u>1/</u>	2.9	2.8	3.3	3.1	2.8	2.7	2.6
GDP Price Index - Chain Wt. <u>1/</u>	1.5	1.7	1.9	1.9	1.8	1.8	1.8
CPIU <u>1/</u>	1.8	2.0	2.1	2.1	2.1	2.1	2.0
Real Disposable Income <u>1/</u>	1.2	1.3	3.3	3.5	3.3	2.7	2.6
Pre-tax Profits <u>1/</u>	1.5	2.4	6.2	0.6	1.9	1.9	3.2
Unemployment Rate <u>3/</u>	8.3	7.8	7.2	6.6	6.2	5.8	5.6
Housing Starts <u>4/</u>	1.0	1.4	1.7	1.7	1.8	1.8	1.8
3-month Treasury Bills <u>3/</u>	1.4	3.4	3.6	4.5	4.6	4.6	4.6
30-Year Fixed Mortgage Rate <u>3/</u>	5.3	6.1	6.2	7.0	7.1	7.2	7.2
Trade Balance <u>2/</u>	-589	-601	-603	-616	-622	-591	-545
Vehicle Sales - Total <u>4/</u>	14.6	15.8	16.5	17.0	17.3	17.0	16.8
Real Non-Res Fixed Investment <u>1/</u>	8.1	5.8	8.1	5.9	4.1	4.1	3.4
Industrial Production <u>1/</u>	3.6	2.6	3.7	2.9	2.7	2.7	2.8

- 1/ Annual Rate of Change (Percent)
2/ Billions of 1996 chained dollars
3/ Percent
4/ Million Units

Alternatives to Natural Gas

Questar Gas customers have alternatives to using natural gas for virtually every application. Some energy applications are dominated by another fuel (cooking, clothes drying) while others are dominated by natural gas (space and water heat). A material shift in customer preference would affect future demand and load profiles.

Solar

It is not anticipated that solar space or water heat will have a significant impact in the Company's service territory. The large investment required does not allow for an attractive payback, thereby limiting the potential.

Air-Source Heat Pumps

Air-source heat pumps are becoming more competitive. There are significant risks to the Company and its customers if these devices proliferate. The loads placed on the system will be substantially lower than a similar customer with conventional natural gas space and water heat, yet the investment to serve the customer will not be any lower. Most air-source heat pumps require a back-up heat source for those times when the outside air temperature is too low for the heat pump to meet the need. Since natural gas is the most economic heat source it is anticipated that natural gas will be selected by most consumers for the back-up role.

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 caused by these customers. There are only a handful of days each winter when temperatures are too low for these units to operate efficiently. As a result the potential for peak load attributable to these units will not be evident in the load data used to predict peak requirements.

The second risk is more significant for other customers. The cost to serve customers with air-source heat pumps is essentially identical to the cost to serve a similarly situated traditional customer. With the current rate design, the Company will only recover a portion of the cost of service from air-source heat pump customers. The direct effect of this under collection will be that other customers will be required to make up the difference. This may lead to a material cross subsidy between traditional customers and the air-source heat pump customers.

Ground-Source Heat Pumps

While ground-source heat pumps may have similar risks to the air-source heat pumps, the potential for significant penetration is very low. There is a large capital investment required for these installations. Commercial customers with adequate acreage have begun adopting this technology. The decision to install ground-source heat pump technology is often driven by considerations beyond pure economics.

Company Use and Lost-and-Unaccounted For-Gas

The Company use, lost and unaccounted for calculation is based on a three-year rolling average, year-ending June 30. The calculation is performed by dividing Company use (accounts 810 and 812), loss from tearouts and unaccounted for gas by total system receipts as recorded by gas control.

The most recent calculation for year-end June 30, 2010 results in a system Company use, lost and unaccounted for percentage of 1.645%.

The current calculation for the most recent 3 years is included in the following table.

QGC Estimated Company Use and Lost-and-Unaccounted-For-Gas Calculation Three Year Rolling Average with Temp and Elevation Comp								
Year	QGC Customer Sales	QGC Customer Transport.	Total Receipts	QGC Sales & Transportation	QGC Use Acct. 810&812	QGC Loss Due To Tearouts	QGC Loss & Unaccounted For Gas	Total Sales, Transport, Company Usage and L&U
2007-2008	120,344,724	62,143,455	182,488,179	179,214,571	247,144	38,123	2,940,308	182,440,146
2008-2009	110,423,554	62,770,745	173,194,299	171,352,596	271,987	24,889	1,517,105	173,166,577
2009-2010	118,608,835	57,431,097	176,039,932	172,275,992	241,077	23,346	3,444,397	175,984,812
Total	349,377,113	182,345,297	531,722,410	522,843,159	760,208	86,358	7,901,810	531,591,535
Lost-&Unaccounted-For-Gas %		1.486%		Company Use and Lost-&Unaccounted-For-Gas %			1.645%	

Questar Gas has implemented the following activities to minimize lost and unaccounted for gas by reducing natural gas emission during pipeline construction and operations activities:

- **Maintenance work on high pressure feeder lines.** When scheduled maintenance work requires the feeder line to be blown down, the line is allowed to feed down to the lowest possible pressure before being completely blown down. This minimizes the amount of gas that is blown down to the atmosphere. The pressure is recorded to allow the amount of gas that is blown down to be calculated.
- **Feeder line replacement project.** The feeder line replacement project replaces aging infrastructure to ensure the safety and reliability of the distribution system.
- **Hot tapping.** The Company utilizes hot taps when making branch connections on the feeder line system to eliminate the need to blow down sections of the feeder line. The hot tapping process allows this work to be completed while the line remains in service.
- **Excess flow valves.** The Company installs an excess flow valve on any new or replaced service line serving a single-family residence (when commercially available). The excess flow valve is designed to limit the amount of gas lost in the event of the service line being severed (i.e. third party damage).

- **Leak survey and repair.** The Company regularly conducts leak surveys and performs system maintenance as required.
- **Response time to leak calls.** The Company continues evaluating ways to reduce response time to gas leak calls through efficiencies in how employees are dispatched to these gas leaks. A GPS system to allow dispatchers the ability to dispatch personnel based on their geographic proximity to the leak site is currently being implemented.
- **Leak detection equipment.** The Company utilizes advanced technologies for locating and identifying leaks. Examples include the RMLD (remote methane leak detection) and the Rover (gas detector).
- **Research and Development.** The Company participated in a Gas Technology Institute study to identify factors for fugitive emissions from various types of facilities.

Forecast Exhibits

The following charts summarize the customer and gas demand forecast. All charts contain temperature-adjusted data.