

DEMAND SIDE MANAGEMENT

In the 2005 IRP it was stated that “in the interest of maintaining the momentum of this latest initiative” (that being the January 13, 2006 DSM Technical Conference on the GDS Report and 2005 SENDOUT modeling results), “Questar Gas has sponsored a series of meetings for all interested parties to begin working on the design, evaluation and implementation of specific DSM programs.” Subsequent to these initial meetings and the submittal of the 2006 IRP, Questar Gas received approval of a Stipulation that approved the Conservation Enabling Tariff and Demand Side Management Pilot Program (Working Group). assigned a full time manager for DSM then formalized and expanded these proceedings into the QGC DSM Working Group (Working Group) greatly accelerating the pace of research, design and implementation for natural gas DSM in Utah.

Background: An informal working group consisting of Questar Gas and many interested stakeholders, including: UPSC, DPU, CCS, Utah State Energy Program (USEP), Utah Governor’s Energy Office, Salt Lake Community Action Program (SLCAP), Utah Low Income Weatherization Assistance Program (ULIWAP), Southwest Energy Efficiency Project (SWEEP), Utah Clean Energy, Energy Strategies and Rocky Mountain Power (RMP) met on several occasions in the spring, summer and fall of 2006, including: May 23, June 5, July 27, August 30 and September 21. The primary purpose of this group was to review, provide input and guide the immediate and detailed research, design and overall scope of initial DSM offerings in Utah.

A significant research initiative undertaken by Questar Gas in conjunction with the Working Group was to retain Nexant, Inc. (Nexant) to prepare a market characterization report to identify target markets and DSM programs expected to provide savings for customers in 2007 and beyond. Nexant recommended best practices for the Company to design its programs. This report was made available for review to members of the Working Group.

In parallel with the DSM work by the Company, Nexant and the Working Group, the Company along with the Division and Utah Clean Energy filed a Joint Application for the Conservation Enabling Tariff (Docket No. 05-057-T01). This docket resulted in an October 5, 2006, Order approving a Settlement Stipulation in the docket, including the establishment a DSM deferral account (182.4), related DSM tariff sheets, the transfer of \$1.3 million of available research and development funds to the DSM deferral account, the formal transition of the QGC DSM Working Group to the QGC DSM Advisory Group (Advisory Group), establishment of a sixty-day time frame for the Company to make an initial application for DSM programs and the Company’s request for expedited approval of its application for DSM programs and a market transformation initiative to capitalize upon the impending initial winter heating season.

Subsequent to the CET Settlement Stipulation Approval Order, the Company held several Advisory Group meetings on the following dates: November 1, November 21 and December 1. The primary role of the Advisory Group during this process was to review

and provide input regarding the Company's detailed plans for DSM programs and the supporting market transformation initiative.

Based on the needs identified in the Nexant Market Characterization study, the Working Group meetings, the CET approval and the compressed schedule for design and implementation of DSM programs, the Company retained the services of two outside DSM program implementation contractors, Nexant, Inc. and Portland Energy Conservation, Inc. (PECI) to assist with the design, implementation and administration of the initial set of DSM programs.

Through the combined efforts of the Company, PECI, Nexant and the Advisory Group, the Company proposed a comprehensive energy-efficiency campaign, including significant DSM programs, for expedited UPSC approval. The Company proposed five DSM programs targeting specific market segments. In addition, the Company proposed a supporting market transformation initiative to begin the process of transforming the Utah natural gas market to one that demands more energy-efficient appliances, products, buildings and practices.

The five DSM programs proposed included: 1) Residential Appliance Rebates; 2) ENERGY STAR® New Homes Rebates; 3) Commercial Customer Rebates; 4) Residential Home Energy Audits and Weatherization Rebates; and 5) increased funding from the existing \$250,000 to a total annual funding level of \$500,000 for the Low Income Weatherization Assistance Program (LIWAP) administered by the Utah Department of Community and Economic Development (DCED).

Modeling: The Company is committed to proposing and implementing energy-efficiency measures that are cost-effective for the Company and our customers. To further this commitment, the Company developed an Excel-based model (DSM Model), in addition to the IRP SENDOUT model, to facilitate the screening of DSM measures, programs and the overall energy-efficiency campaign.

It is important to note that the DSM Model was designed from the program implementation perspective and offers ease and flexibility of DSM program screening and sensitivity analyses per measure, as well as at the program and overall campaign levels. In the DSM Model, program costs are calculated at the program level rather than allocated at the measure level, which can be subjective and limiting to program offerings. Results from DSM modeling in the SENDOUT model can be found in the Results Section of this IRP.

The DSM Model is based on the California Standard Practice Manual (Standard Practice Manual) for the Economic Analysis of Demand-Side Programs and Projects, dated October 2001. The DSM Model has been reviewed by Nexant and the DSM Advisory Group for quality control and accuracy. The Standard Practice Manual identifies four primary tests for evaluating the cost effectiveness of DSM measures and programs. Although the Total Resource Cost (TRC) test is generally used in this and other jurisdictions, the Advisory Group agreed that all four tests should be provided in the analysis of the DSM programs.

The DSM Model has been demonstrated and made available to interested parties, including the UDPU, the UCCS and the UPSC. A meeting of interested individuals representing many members of the DSM Advisory Group was held on November 29, 2006 to provide a detailed overview of the operation and use of the DSM Model.

The model has the capability of running sensitivity analyses on various inputs and assumptions such as the discount rate and participation levels. The cost-effectiveness tests included in the application were calculated using a 7% discount rate. This rate is consistent with this IRP report.

The Company has relied on specific market reports, industry studies, and the expertise of PECCI and Nexant to arrive at the projected savings levels, measure life and incremental customer cost for each measure of each program.

A summary of the cost-effectiveness for each program is shown in Exhibits 8.1 thru 8.5.

Exhibit 8.1 summarizes the test results of the five proposed programs along with the market transformation initiative. Although the market transformation initiative does not lend itself to the same economic analysis as the five DSM programs, it has been included so that the overall impact of the overall campaign can be measured and analyzed. As can be seen the benefit-cost ratio for the Total Resource Cost Test (TRC) of the overall campaign (five programs and the market transformation activities) is 1.3. A benefit-cost ratio greater than 1 is indicative of benefits exceeding costs, and therefore “passes” the test. Additionally, the exhibit shows that the Participant Cost Test (PCT) passes at 2.5, the Utility Cost Test (UCT) passes at 1.9 and the Ratepayer Impact Test (RIM) passes at 1.3.

The cost-effectiveness tests for each measure of the Residential Appliance Rebates Program, which as a whole achieves a TRC benefit-cost ratio of 1.4, are summarized on Exhibit 8.2.

The cost-effectiveness tests for each measure of the Commercial Rebate Program, which as a whole achieves a TRC benefit-cost ratio of 2.8, are summarized on Exhibit 8.3.

The cost-effectiveness tests for each measure of the ENERGY STAR® New Homes Rebate Program, which as a whole achieves a TRC benefit-cost ratio of 1.4, are summarized on Exhibit 8.4.

The cost-effectiveness tests for each measure of the Residential Home Energy Audit and Weatherization Rebate Program, which as a whole achieves a TRC benefit-cost ratio of 1.1, are summarized on Exhibit 8.5.

The Low-Income Weatherization Assistance Program achieves a TRC benefit-cost ratio of 1.0 as summarized on Exhibit 8.6.

On December 13, 2006 a Questar Gas DSM Technical Conference was held to provide an overview of the Questar Gas DSM Application, as well as to provide for further input and discussion. On January 16, 2006 the UPSC approved the Questar Gas DSM Application (Docket 05-057-T01) on a three-year pilot basis with an effective date of January 1, 2007.

Upon receiving UPSC approval of the Questar Gas DSM Application, the Company launched all of the DSM programs, as well as the supporting market transformation initiative under the campaign name ThermWise on February 26, 2007. In the few weeks that have followed the campaign launch, the Company has been diligently working with market actors to ensure consumer awareness and measure availability. In addition, response to date regarding the campaign offerings has been tremendous and very positive.

A goal of these initial DSM programs is to provide options that reach each market segment within the GS rate class over the three year DSM Pilot Program. The Company, with input from the DSM Advisory Group, will add or modify programs during the DSM Pilot Program. Current discussions have included adding specific measures to the initial programs such as high-efficiency residential boiler systems, a new custom commercial program, a program targeting multi-family dwellings, commercial cooking equipment program, a quick response conservation program and other low-cost broad-implementation measures.

The Company will perform program evaluations over the life of the programs. An in-depth, independent evaluation will be conducted once the programs have been operating for a reasonable period of time. A limited evaluation is expected to be conducted following the one year anniversary of approved DSM programs. The limited evaluation will likely focus primarily on customer awareness, participation levels, process efficiency and customer satisfaction. The results from evaluations will be used to refine the existing programs and to increase the accuracy of future DSM modeling.