

ENERGY-EFFICIENCY PROGRAMS

Utah Energy-Efficiency Results 2010

The Company's 2010 Utah Commission approved energy-efficiency programs and measures were similar to 2009, but also included new measures, minor changes to qualifying equipment, and changes to rebate levels. The major event for the programs in 2010 was the completion and submission of the final (phase II) Questar Gas ThermWise[®] Evaluation by The Cadmus Group, Inc. (Cadmus). Work on the ThermWise[®] evaluations began in June of 2008 and was performed in two phases. In Phase I, Cadmus reviewed the ThermWise[®] program processes to determine what had worked well; what could have made the programs more effective; and what Cadmus recommended modifications could be implemented to improve the ThermWise[®] programs. The Phase I evaluation was completed, submitted to Questar Gas, and reviewed with the DSM Advisory Group in November of 2008.

Work on the Phase II evaluation began early in 2009. The Phase II evaluation focused on the impact of the programs and includes a pre and post-ThermWise[®] billing analysis of participants and non-participants with similar characteristics. Cadmus delivered the final Phase II report to Questar Gas on September 28, 2010 and Questar Gas subsequently sent it to the Division and other members of the DSM Advisory Group. The key findings of the Phase II report are the Cadmus'-calculated realization and free-ridership rates. Realization rates are defined as the percentage of the Company's deemed savings which were actually realized by ThermWise[®] program participants. Cadmus calculated the realization rates using the billing analysis technique previously described. Free-ridership rates are defined as the percentage of participants in the programs who would have installed an energy-efficiency measure independent of any rebate. Cadmus analyzed the free-ridership rates through customer surveys. The Cadmus realization and free-ridership rates are reported in Table 1 of page 5 of the final Phase II evaluation and are summarized in the following table:

Table 1 – Cadmus realization & free-ridership rates by program

Program	Realization Rate	Free-ridership Rate
Appliance	90%	31%
Builder	25.5%	48%
Business	120%	26%
Business Custom	100%	0%
Home Energy Audit	90%	0%
Weatherization	78%	23%
Multi-family	72%	9%

Questar Gas factored the realization rates into the ThermWise® year end 2010 results and delivered those results to the Division on March 8, 2011. Questar Gas also factored the realization rates into the 2010 Energy-Efficiency Model, the results of which are shown in Table 2. Free-ridership held constant at 20% across all 2010 programs. Questar Gas modified the Appliance and Builder programs in 2011. These modifications should result in a significant reduction to free-ridership.

ThermWise® Appliance Rebates.

In 2010 the Company continued this program with the addition of a second tier rebate for certain high-efficiency gas water heaters. Beginning in 2010, Questar Gas customers who purchased and installed high-efficiency gas water heaters with an Energy Factor (EF) of .67 greater were eligible for a rebate of \$100.

ThermWise® Builder Rebates.

The Company continued this program in 2010 with the addition of .67 EF water heaters to the list of rebate qualifying measures.

ThermWise® Business Rebates.

In 2010 the Company continued this program with several minor changes to eligibility requirements. In addition, in 2010 this program made a distinction between new construction and retrofit attic and wall insulation. In order to receive a rebate, new construction attic insulation installed at a level of R-5 or greater than code would receive a rebate of \$.04 per square foot. New construction wall insulation installed at a level of R 3.7 or greater was eligible for a rebate of \$.03 per square foot. Customers who installed retrofit attic and wall insulation in an increment of R-10 or greater in 2010 were eligible for rebates of \$.08 and \$.06 per square foot, respectively. This change more closely aligned the program with the existing market conditions.

ThermWise® Weatherization Rebates.

In 2010, the Company continued this program with the introduction of a tiered attic insulation rebate. The intent of this second tier attic insulation rebate (\$.07 per square foot) was to incent customers to bring their homes to the minimum energy efficiency code (IECC 2006) requirement of R-38. Exhibit 8.1 details the different scenarios for pre-existing and new insulation that was required to be installed in 2010 in order for customers to be eligible for an insulation rebate.

Additionally, beginning in 2010, participation in attic, wall, and floor insulation were limited to one rebate per measure for the lifetime of the premise. In other words, a customer who received a rebate for attic, wall, or floor insulation for a certain residence in 2007 was not eligible to receive an additional insulation rebate for that residence in 2010.

ThermWise® Home Energy Audit.

The Company continued this program in 2010 with no significant changes.

Low-Income Weatherization Assistance (LIWAP).

In 2010 the Company continued funding of the LIWAP to a level of \$500,000 per year from the energy-efficiency budget (\$750,000 total Company funding). The Company disbursed \$250,000 in January of 2010 and another \$250,000 in July of 2010.

ThermWise® Multi-Family Rebates.

The Company continued this program in 2010 with several changes. The program implemented the tiered attic insulation rebate structure outlined in the 2010 ThermWise® Weatherization Rebates program above. Also, Questar Gas implemented the tiered high efficiency gas water heater rebates in the Multi-Family Program as outlined in the 2010 Appliance and Builder sections.

In addition, the duct sealing and insulation measures, previously only available to residential GS customers, were extended to qualifying customers in the multi-family market. The qualifications for duct sealing and insulation measures were the same as in the 2010 Weatherization program and the rebate amounts were \$125 and \$150 respectively per unit.

ThermWise® Business Custom Rebates.

The Company continued this program in 2010 with no changes.

A summary of the projected and actual benefit-cost ratios for each of the 2010 ThermWise® programs is shown below.

Table 2 – 2010 Projected & Actual B/C ratios by program and California Standard Practice Test

Program	Total Resource Cost Test		Participant Test		Utility Cost Test		Ratepayer Impact Measure Test	
	2010 Projected B/C	2010 Actual B/C	2010 Projected B/C	2010 Actual B/C	2010 Projected B/C	2010 Actual B/C	2010 Projected B/C	2010 Actual B/C
ThermWise [®] Appliance Program	1.89	1.10	2.23	2.10	2.95	1.79	1.93	1.13
ThermWise [®] Builder Program	1.62	0.32	2.33	0.94	2.44	0.52	1.70	0.45
ThermWise [®] Business Custom Program	1.73	1.08	5.24	3.15	1.95	1.74	1.57	1.22
ThermWise [®] Business Program	2.60	1.98	2.87	3.50	4.50	3.35	2.98	1.91
ThermWise [®] Weatherization Program	2.55	1.27	2.63	2.24	3.87	1.94	2.33	1.22
ThermWise [®] Home Energy Audit	1.06	0.32	20.57	24.73	1.05	0.32	0.87	0.29
ThermWise [®] Multi-Family Program	1.15	0.56	1.65	1.41	1.80	0.92	1.36	0.71
Low Income Weatherization	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Market Transformation	0.00	0.00	N/A	N/A	0.00	0.00	0.00	0.00
TOTALS	2.15	1.08	2.50	2.10	3.21	1.65	2.08	1.10

While actual benefit/cost results for 2010 were lower than the corresponding budget projections (due to the integration of the realization results from Table 1), the ThermWise[®] programs as a whole passed all four of the California Standard Practice tests. Additionally, Questar Gas took steps in the 2011 program design to increase benefit/cost and net present value (NPV) results (shown in Table 3) at both the individual program and total ThermWise[®] portfolio levels.

Customer participation in the 2010 programs remained high with actual participation surpassing budget participation in the Appliance (151%), Builder (192%), and Business Custom (167%) programs. The Weatherization program had the highest total number of participants (90,455) and achieved 99% of its 2010 participation goal. The Business program was short of the 2010 participation goal (61%) but still achieved 106% of its 2010 natural gas savings goal. The Multi-Family program achieved 50% its 2010 participation goal.

During 2010, the Utah DSM Advisory Group continued to meet to discuss the Company's energy-efficiency initiative. Five meetings were held on the following dates: February 25, June 17, July 12, August 26, and September 20. In addition to overall program performance, the progress/results of the ThermWise® phase II evaluation was also a topic of discussion at those meetings.

Wyoming Energy-Efficiency 2010

The Wyoming energy-efficiency programs have seen good participation and interest from customers between the time they were launched (July 2009) and the end of 2010. In the first full program year (July 2009 through June 2010) the Wyoming ThermWise® programs had 549 participants or 2.3% of the Company's December 31, 2010 Wyoming residential GS customer base. In contrast, the first six months of the second year Wyoming programs saw 456 participants or 83% of the first full year program results. The Company expects participation in Wyoming to increase as customer education and market transformation efforts continue. The Company is increasing the use of Wyoming-based employees to promote and deliver the Wyoming ThermWise® programs. This will lower the cost of delivery for the ThermWise® programs in Wyoming.

Energy-Efficiency Plan 2011

Based on work with the Utah DSM Advisory Group, Utah-based trade allies, program administrators and other energy-efficiency stakeholders, the Company proposed, and the Commission approved, the continuation of seven of the eight energy-efficiency programs from 2010 as well as the ThermWise® Market Transformation initiative. The ThermWise® energy-efficiency programs continuing in 2011 are: 1) the ThermWise® Appliance Rebates Program; 2) the ThermWise® Builder Rebates Program; 3) the ThermWise® Business Rebates Program; 4) the ThermWise® Weatherization Rebates Program; 5) the ThermWise® Home Energy Audit Program; 6) funding of \$500,000 for the Low-Income Weatherization Assistance Program administered by the Utah Department of Community and Economic Development; and 7) the ThermWise® Business Custom Rebates Program.

In an effort to improve administrative efficiency, the Company discontinued the ThermWise® Multi-family Rebate Program as a stand-alone program in 2011. Questar

Gas is continuing to offer the multi-family measures as part of other related programs. The multi-family appliance measures, for example, are included in the ThermWise[®] Appliance Rebates program, the multi-family weatherization measures are included in the ThermWise[®] Weatherization Rebates program, and the multi-family new construction measures are included in the ThermWise[®] Builder Rebates program.

The 2011 programs also included the addition of new rebate measures and an update and/or revision of certain program measures and deemed savings in an effort to incorporate the findings of the final Phase II Cadmus report, improve customer uptake, improve program cost effectiveness, and to align the programs with current market conditions.

ThermWise[®] Appliance Rebates.

The Company will continue this program in 2011 with changes relating to appliance efficiency and the addition of new equipment to the overall offerings of rebates for customers. Those changes and additions are as follows: 1) eliminate the rebate for clothes washers with modified energy factor (MEF) of 1.80 to 1.99, and increase the MEF for ENERGY STAR[®] clothes washers to 2.60 or greater; 2) offer a rebate for high-efficiency condensing gas storage water heaters with an energy factor (EF) of 0.90 or greater; 3) offer a rebate for high-efficiency hybrid gas water heaters with a thermal efficiency (TE) of 90% or greater; 4) offer a tiered rebate for tankless gas water heaters, Tier 1 with an EF of 0.82-0.89 and a Tier 2 with an EF of 0.90 or greater; 5) offer a tiered rebate structure for high-efficiency furnaces, (Tier 1 with an annual fuel utilization efficiency (AFUE) of 90% - 91.9%, a Tier 2 with an AFUE of 92% - 94.9%, and a Tier 3 with an AFUE of 95% or greater); 6) increasing the efficiency rating of residential gas boilers to 95% AFUE or greater; 7) update the specifications for solar requirements on equipment from OG-100 to OG-300; 8) eliminate the rebate for clothes dryers; and 9) and offer a rebate for energy-efficient fireplaces, that are direct-vented, have energy-efficiency of 70% or greater, are thermostatically controlled, have intermittent ignition and have a blower included with the product. This program will continue to be offered to customers in the Company's Utah service territory and administered by PECCI.

ThermWise[®] Builder Rebates.

The Company will continue this program in 2011 with several changes. The Company consolidated the multifamily new construction measures into the builder rebates program for the purpose of reducing overall program costs. The builder program now includes all newly constructed residences receiving service on the GS rate schedule. A qualifying single-family residence is a new structure that has up to four residential dwelling units. A qualifying multifamily residence is a new structure having five or more residential dwelling units. Incentives will continue to be paid, tracked, and reported as single-family and multi-family.

During 2011 the EPA will be transitioning to a more stringent version of ENERGY STAR® certification. Depending on the stage of construction during 2011, builders will be required to comply with different versions of the ENERGY STAR® certification process, transitioning from version 2.0 (current ENERGY STAR® verification standard) to version 3.0 (the final upgraded standard).

To recognize the impact of the transition taking place in the ENERGY STAR® program, Questar Gas will offer a tiered approach to ENERGY STAR® home certification for builders. Each tier will also require increased efficiency in space and water heating requirements. This tiered approach will allow continued builder participation while at the same time allowing education on the more stringent standards that will take place, with the end goal of continued energy-efficient improvements in the new residential building stock. The Company will continue to offer residential builders rebates for energy efficient gas appliances as stand-alone measures that mirror the appliance rebate program. This program will continue to be offered to customers in the Company's Utah service territory and administered by PECI.

ThermWise® Business Rebates.

The Company will continue this program in 2011 with the following improvements: 1) offer rebates for GS residential single-family and multi-family units with qualifying boilers over 300,000 Btus; 2) slightly increase rebate amounts for retrofit weatherization measures, specifically, attic and wall insulation; 3) add a rebate for high-efficiency condensing gas storage water heater and a rebate for hybrid gas storage water heaters; 4) remove gas clothes dryers and programmable thermostats from the program; and 5) eliminate the rebates for clothes washers with an MEF below 2.6. These improvements will more closely align the program with market conditions and will help to ensure that program savings are achieved as desired. This program will continue to be available to GS commercial customers in the Company's Utah service territory and administered by Nexant.

ThermWise® Weatherization Rebates.

In 2011, the Company will continue this program with several improvements. The most substantial change is the requirement that attic insulation, floor insulation, wall insulation, duct insulation and duct sealing must be performed by an authorized contractor (Authorized Contractor). This program change will help protect utility customers from fraud and ensure that program dollars are spent prudently for measures that achieve savings. The Company discussed these issues and its proposed requirement that eligible work be performed by Authorized Contractors with the Utah DSM Advisory Group on August 26 and September 20, 2010.

In addition to the above change, the Company will administer all residential weatherization incentives under a single program in 2011. The weatherization program

will include all residences receiving service on the GS rate schedule. A qualifying single-family residence will be an existing structure with up to four dwelling units. A qualifying multi-family residence will be an existing structure with five or more dwelling units. Incentives will continue to be paid, tracked, and reported as single-family and multi-family but administration of the programs will be combined. For qualifying multi-family residences, a pre-qualification inspection will continue to be required.

Also in 2011, the Company will adjust the one-time insulation per premise restriction to allow previous participants in tier 1 attic insulation to receive a tier 2 attic insulation rebate. In order to qualify for this expanded eligibility, customers will be required to have a recommendation for additional attic insulation from either an in-home ThermWise® Home Energy audit or a Home Performance with ENERGY STAR® audit.

Customers performing self-installed weatherization in 2011 will be eligible for rebates if the work is verified by an in-home ThermWise® Home Energy Audit.

Additional program changes include increasing the energy efficiency of qualifying replacement windows to the 2011 ENERGY STAR® standard of a .30 U factor. Rebates will continue to be offered for programmable thermostats that meet minimum requirements.

Finally, the Company will combine the duct-sealing and duct insulation measures in 2011. Participants in the combined measure will be required to seal and insulate all ductwork in unconditioned spaces. The rebate structure for this measure will be a fixed payment of \$100 per qualifying job plus \$5.25 per linear foot of ductwork sealed and insulated. The total rebate available for this measure will be capped at \$450 per job for single family dwellings and \$250 per job for qualifying multi-family dwellings. Emphasis will continue to be placed on contractor education and training along with customer marketing and awareness. This program will continue to be available to existing residential customers in the Company's Utah service territory and to be administered by Nexant.

ThermWise® Home Energy Audit.

The Company is continuing this program with no significant changes. The ThermWise® Home Energy Audit Program is offered and administered by Questar Gas with periodic consulting and assistance from Nexant. This program includes two primary components: in-home energy audits performed by trained and experienced Questar Gas Auditors and "do-it-yourself" mail-in audits with on-line data input availability. This program will continue to be available to customers in the Company's Utah service territory and administered by Questar Gas.

Low-Income Weatherization Assistance (LIWAP).

In 2011 the Company will continue funding the LIWAP at \$500,000 per year from the energy-efficiency budget (\$750,000 total Company funding). The Company will disburse \$250,000 every six months, with the disbursements occurring in January and July.

ThermWise® Multi-Family Rebates.

In the 2011 budget filing, the Company sought and received Utah Commission approval to discontinue the Multi-family program as a stand-alone program. This was done to reduce administrative costs and improve the overall cost-effectiveness of the ThermWise® portfolio. The multi-family measures in 2011 will be split between three of the ThermWise® programs. Rebates for existing multi-family residences (with the exception of weatherization measures) will be paid through the Appliance program. Rebates for new construction multi-family residences will be paid through the Builder program. Multi-family weatherization rebates will be paid through the Weatherization program. Participation in multi-family measures will continue to be tracked and reported separately from single family measures.

ThermWise® Business Custom Rebates.

The Company is continuing this program in 2011 with no significant changes. Nexant will continue to administer the Business Custom program.

A summary of the cost-effectiveness used in the energy-efficiency model for each ThermWise® program based upon the 2011 budget and projections is shown in Table 3.

Table 3 – 2011 projected NPV & B/C ratios by program and California Standard Practice Test

2011 Projections	Total Resource Cost		Participant Test		Utility Cost Test		Ratepayer Impact Measure Test	
	NPV*	B/C	NPV*	B/C	NPV*	B/C	NPV*	B/C
ThermWise Appliance Program	\$7.82	1.89	\$24.83	4.00	\$8.99	2.19	\$3.66	1.28
ThermWise Builder Program	\$0.11	1.04	\$4.21	3.07	\$0.18	1.07	-\$0.72	0.80

ThermWise Business Custom Program	\$0.05	1.10	\$0.70	5.29	\$0.11	1.25	-\$0.02	0.96
ThermWise Business Program	\$1.35	1.64	\$4.14	3.09	\$2.17	2.67	\$1.39	1.67
ThermWise Weatherization Program	\$5.65	1.21	\$36.24	2.26	\$15.45	1.93	\$5.67	1.21
ThermWise Home Energy Audit	-\$0.35	0.54	\$0.74	31.23	-\$0.35	0.54	-\$0.49	0.45
Low Income Weatherization	\$0.04	1.08	\$0.71	0.00	\$0.39	1.08	-\$0.13	0.80
Market Transformation	-\$1.75	0.00	\$0.00	N/A	-\$1.75	0.00	-\$1.75	0.00
TOTALS	\$12.93	1.30	\$71.57	2.73	\$24.84	1.79	\$7.60	1.16

*Shown in millions

SENDOUT Model Results for 2011

Projections from the approved 2011 energy-efficiency budget were entered into the SENDOUT model in response to the Utah Commission’s request. Data entries for the 2011 energy-efficiency programs included participants and deemed lifetime Dth savings per program measure. Incentive (variable) and administration (fixed) costs for each program measure were also incorporated into the SENDOUT model.

The SENDOUT model used the projected 2011 participation and administration costs as the baseline for its analysis of each program. For each program, the model then examined what would happen if participation was reduced to as low as 25% or increased to as high as 150% of the 2011 projection. The model also examined different scenarios involving the escalation of annual administration costs per program. In these scenarios, administration costs per program were increased to 150% and 200% of the 2011 projection. SENDOUT then made the judgment as to whether a program should be “accepted” (100% on the included graph) or “rejected” (0% on the included graph) based on a given level of participation and administration costs. Please see Exhibit 8.1 for the SENDOUT results in a table format.

The 2011 ThermWise® Appliance and Weatherization programs were accepted by the model at 25% of 2011 projected participation if administration costs were increased to 200% of the 2011 budget projection. The Business program was accepted by SENDOUT at 50% of projected participation if administration costs were increased to 200% of the projection. The ThermWise Builder program was accepted by the model at 50% of projected participation if administration costs were increased to 150% of the projection. The Business Custom program was accepted at 100% of participation and 150% of projected administration costs. The Home Energy Audit program was not accepted by the model at any combination of participation and administration costs. This is not a concern to the Company at this time because the Home Energy Audit program acts as a feeder program to the rebate programs and also has other benefits which to date

have not been quantified. The Company is examining options to make the Home Energy Audit program more cost-effective in the 2012 program year.

Another way to view the results of the SENDOUT model is to analyze the level that administration costs could increase if participation was held at 100% of the 2011 projection. In this scenario, SENDOUT would suggest that the administration costs for the Appliance and Weatherization programs could increase by eight times the 2011 budget projection and still be accepted. The Business program could increase by six times projected administration costs. The Builder program could increase by two times projected administration costs and still be accepted by SENDOUT.

In summary, the SENDOUT model results indicate that as a gas supply resource at the approved budget and participation levels, the 2011 energy-efficiency programs are accepted as qualifying and cost-effective resources when compared to other available resources. Furthermore, this holds true when participation rates are held constant and program administrative costs are increased by, in some cases, as much as eight times 2011 budget levels.

In comparison to the SENDOUT model which is a comprehensive resource planning and evaluation tool, the Questar Gas' Energy-Efficiency model which was developed in-house by the Company with the assistance of the Questar Gas Utah DSM Advisory Group and reviewed by the Utah Commission, is used for the sole purpose of modeling Questar Gas' energy-efficiency programs. To this end, the Company relies on the Questar Gas energy-efficiency model for energy-efficiency program planning purposes and more importantly energy-efficiency program cost effectiveness (based on the California Standard Practices Model).

Using the Questar Gas energy-efficiency model, the Company analyzed the approved 2011 energy-efficiency programs at a "break-even" benefit / cost ratio (B/C = 1.00) by holding participation (and incentive payments) constant and increasing all other costs in a linear manner. This analysis resulted in a projected potential total energy-efficiency spending limit of \$36.4 million per year versus the current approved \$32.2 million per year for the 2011 projected natural gas savings of 789,990 Dth. This analysis indicates that the maximum potential spending on energy-efficiency is directly related to the cost-effectiveness of realizing each Dth saved. Therefore, as long as the Company's energy-efficiency programs are determined cost-effective in the Questar Gas energy-efficiency model, accepted by the SENDOUT model when compared to other available resources, and do not negatively impact company operations, energy-efficiency programs are an appropriate resource.

Avoided Costs Resulting From Energy-Efficiency

The ThermWise[®] Cost Effectiveness Model calculates the avoided cost of gas purchases as the sole benefit of the energy-efficiency programs. In 2010, the avoided gas cost attributable to energy-efficiency was calculated as \$58.9 million. For 2011, the

avoided gas costs attributable to energy efficiency are estimated to be \$47.7 million. The avoided purchased gas is valued at the same price level in the IRP modeling and the ThermWise[®] Cost Effectiveness Model.