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MEMORANDUM

To: Public Service Commission

From: Division of Public Utilities
Philip Powlick, Director
Energy Section
Marlin H. Barrow, Technical Consultant
Doug Wheelwright, Utility Analyst
Artie Powell, Manager

Date: December 1, 2008

Subject: Action Request Docket No. 08-057-22, Questar Gas DSM Budget for 2009.

ISSUE:

On October 1, 2008, Questar Gas Company (QGC) filed an application with the Utah Public Service Commission (PSC) for approval of its Demand Side Management (DSM) programs and Market Transformation Initiative budget for 2009.

RECOMMEND APPROVAL:

The Division has reviewed the Application as filed and recommends to the Commission the approval of QGC's 2009 DSM budget.

DISCUSSION:

History:

The original Demand Side Management programs and Market Transformation Initiative were the products of a collaborative effort of interested parties working with QGC to provide input and to design programs to benefit QGC's GS-1 and GSS rate class customers by reducing their usage of natural gas through programs designed to improve the efficiency of the customer's natural gas usage. The process began with QGC's CET application to the PSC on December 16, 2005 in Docket No. 05-057-T01. Subsequent to that initial filing in Docket No. 05-057-T01, there were technical conferences and numerous meetings with the parties in that case.

During this period, an informal DSM working group was created. This working group, which consisted of members representing the Public Service Commission, Committee of Consumer Services, the Division, Questar Gas Company, Salt Lake CAP, Utah Weatherization, SWEEP, Utah Clean Energy, Utah Governor's Office, Dept. of Natural Resources and Energy Strategies met on seven separate occasions beginning March 1, 2006 through September 21, 2006. In this time period, initial work on developing DSM programs began and continued right on through to the time when the PSC, in an order issued on October 5, 2006, established a formal DSM Advisory Group and gave QGC 60 days to present DSM programs to the PSC for its review.

The Advisory Group met on November 1, November 21 and on December 1 of 2006 to review, refine and provide feedback on the work that QGC and its consultants, Nexant and Portland Energy Conservation, Inc. ("PECI") put into the DSM program development. The results of those efforts (filed with the PSC on December 5, 2006) included a first year budget for the programs totaling \$7 million.

The Advisory Group continued to meet during 2007, when programs were reviewed and the Company reported on market transformation efforts and program participation levels. Changes to existing programs and recommendations for new programs were reviewed and discussed by the Advisory Group. In its January 16, 2007 Order issued in Docket No. 05-057-T01, the Commission ordered the Company to submit a second year budget by October 1, 2007 and a

third year budget by October 1, 2008 for the proposed DSM programs and the market transformation initiative.¹ The Company filed with the PSC on October 1, 2007 in Docket No. 07-057-08 a second year budget in the amount of \$10.5 million. The Company filed with the PSC on October 1, 2008 in Docket No. 08-057-22 a third year budget totaling \$17.8 million for its existing DSM programs and its ongoing Market Transformation Initiative.

PLAN SUMMARY

The following table summarizes QGC's proposed 2009 DSM Budget by program.

2009 PROPOSED DSM BUDGET	2009 Budget (millions)	Estimated Annual Dth Savings	Estimated Participants
Thermwise Appliance Rebates Program	\$ 5.067	151,279	34,685
Thermwise Business Rebate Program	\$ 0.737	49,239	1,364
Thermwise Builder Rebate Program	\$ 2.261	52,049	3,215
Thermwise Residential Weatherization Program	\$ 4.923	100,272	15,746
Thermwise Residential Home Energy Audit Program	\$ 0.648	12,124	3,593
Low Income Weatherization	\$ 0.500	-	-
Thermwise Multi-Family Rebates Program	\$ 2.091	26,273	3,309
Thermwise Business Custom Rebates Program	\$ 0.294	7,513	15
Market Transformation	\$ 1.266	-	-
Total	\$ 17.787	398,749	61,927

¹ Commission Order, January 16, 2007, Docket No. 05-057-T01, p9, #7 & #8.

The following table reflects the results of the 2009 DSM Budget using the California Tests Model.

DEMAND SIDE MANAGEMENT 2009 BUDGET - PROGRAM PORTFOLIO DESCRIPTIONS (1 Year)									
PROGRAMS	Total Resource Cost		Participant Test		Utility Cost Test		Ratepayer Impact Measure Test		Total Participants
	NPV	B/C	NPV	B/C	NPV	B/C	NPV	B/C	1 Years
1 Thermwise Appliance Rebate	\$6,591,549	1.8	\$9,971,404	2.2	\$9,290,127	2.8	\$6,725,466	1.9	34,685
2 Thermwise Business Rebates	\$2,471,117	3.0	\$2,716,909	3.4	\$2,979,347	5.0	\$2,553,132	3.2	1,364
3 Thermwise Builder Rebates	\$2,483,479	1.7	\$4,201,319	2.3	\$3,683,410	2.6	\$2,620,019	1.8	3,215
4 Thermwise Weatherization Rebates	\$7,861,087	2.5	\$10,822,172	2.8	\$8,407,725	2.7	\$6,147,766	1.9	15,746
5 Thermwise Home Energy Audit	\$7,174	1.0	\$765,749	24.5	\$650	1.0	-\$134,405	0.8	6,151
6 Low Income Weatherization	\$14,215	1.0	\$395,423	0.0	\$14,215	1.0	-\$74,637	0.9	270
7 Thermwise Multi-Family Rebates	\$735,547	1.3	\$2,401,751	2.5	\$1,068,113	1.5	\$520,018	1.2	3,309
8 Thermwise Business Custom Rebates	\$241,775	1.8	\$519,839	5.2	\$264,647	1.9	\$194,359	1.5	15
9 Market Transformation	-\$1,265,802	0.0	\$0	N/A	-\$1,265,802	0.0	-\$1,265,802	0.0	850,000
10 Totals	\$19,140,141	1.8	\$31,794,566	2.5	\$24,442,431	2.4	\$17,285,916	1.7	914,755

Note: B/C = Net Present Value of Benefits divided by Net Present Value of Costs

PROGRAM REVIEW

The existing DSM programs are: 1) the ThermWise Appliance Rebates Program; 2) the ThermWise Builder Rebates Program; 3) the ThermWise Business Rebates Program; 4) the ThermWise Weatherization Program; 5) the ThermWise Home Energy Audit Program; 6) the Low-Income Weatherization Assistance Program administered by the Utah Department of Community and Economic Development; 7) the ThermWise Multi-Family Rebates program; 8) the ThermWise Business Custom Rebates program.

THERMWISE APPLIANCE REBATES PROGRAM

This program has the same major measures or choices to upgrade home appliances as those offered in the 2008. One of the programs, the Energy Star clothes washer offers a tier 1 or tier 2 choice to customers. The efficiency requirements for the tankless water heaters and the tier 1

clothes washer have been increased to meet the Energy Star label requirements. This program is administered by PECI and has a third year budget cost of \$5.067 million which is a 98% increase over the 2nd year budget amount of \$2.563 million. The customer rebates will vary depending on customer participation.

The table below compares the 2009 Budget to the 2008 Budget for this program along with 3Q 2008 YTD actual results. The table does show benefit cost ratios that are all above 1.0.

Thermwise Appliance Rebates Program				
Dollars in Thousands				
	2008	2008	2009	% 2009 Budget
	3Q Actual YTD	Approved Budget	Proposed Budget	Over 2008 Budget
Customer Rebates	\$ 2,828	\$ 1,713	\$ 4,005	133.8%
Program Costs	\$ 281	\$ 850	\$ 1,062	24.9%
Total Costs	<u>\$ 3,109</u>	<u>\$ 2,563</u>	<u>\$ 5,067</u>	<u>97.7%</u>
Projected Ann Dth Savings (1)	81,147	64,930	151,279	133.0%
Participants	23,444	16,185	34,685	114.3%
Total Budget \$ / First Year Dth Savings (\$	38.31	\$ 49.34	\$ 41.87	-15.1%
Toal Resource Cost Test B/C	1.9	1.6	1.8	
Participants Test B/C	2.2	2.2	2.2	
Utility Test B/C	3.1	2.4	2.8	
Rate Payer Impac Test B/C	2.0	1.7	1.9	

(1) Actual & \$/Dth Savings expressed on an 80% net to gross ratio

THERMWISE BUILDER REBATES PROGRAM

There are seven measures in this program which range from the building of a residential structure that meets the certification requirements for the Energy Star rating to the installation of furnaces or water heaters that meet the Energy Star rating requirements. It also includes high-efficiency gas boilers and solar assisted water heating systems. The water heaters and furnace measures are the same as those offered in the ThermWise Appliance Rebates. A name change has been given to the Energy Star Home with Federal Tax Credit. The new name is now a High Performance Home. This name change was instituted due to the federal tax credits expiring at the end of 2008. This program is administered by PECI and has a third year budget of \$2.261. This is a 3% decrease from the 2008 budget.

The table below compares the 2009 Budget to the 2008 Budget for this program along with 3Q 2008 YTD actual results. The table does show benefit cost ratios that are all above 1.0.

Thermwise Builder Rebate Program				
Dollars in Thousands				
	2008	2008	2009	% 2009 Budget
	3Q Actual YTD	Approved Budget	Proposed Budget	Over 2008 Budget
Customer Rebates	\$ 1,192	\$ 1,241	\$ 1,281	3.2%
Program Costs	\$ 465	\$ 1,081	\$ 980	-9.3%
Total Costs	\$ 1,657	\$ 2,322	\$ 2,261	-2.6%
Projected Ann Dth Savings (1)	40,339	49,770	52,049	4.6%
Participants	2,799	3,180	3,215	1.1%
Total Budget \$ / First Year Dth Savings (\$	41.08	\$ 58.32	\$ 54.30	-6.9%
Toal Resource Cost Test B/C	2.1	1.6	1.7	
Participants Test B/C	2.4	2.3	2.3	
Utility Test B/C	3.5	2.4	2.6	
Rate Payer Impac Test B/C	2.1	1.7	1.8	

(1) Actual & \$/Dth Savings expressed on an 80% net to gross ratio

We note that this program was not as quick to see growth as some other parts of QGC's DSM program suite. Initially this was due to the lag time between the planning and building of homes. Recent results have shown improvement. However, it is likely that the current slowdown in the housing starts will affect this program. Credit market problems may also hamper housing completions. Nevertheless, we expect that this program will continue to increase the market penetration of high efficiency new homes and support its continuation.

THERMWISE BUSINESS REBATES PROGRAM

This program offers a variety of measures designed to leverage the marketing access and existing delivery channels of local businesses, wholesalers and retailers to provide cost-effective natural gas savings opportunities. The program is administered by Nexant. The 2009 budget is \$737,000 of which \$394,000 is based on participation levels and \$343,000 for program costs. The amount requested in this year's budget represents an increase of 47% over the 2008 budget. The largest percentage of this increase is in the proposed customer rebates.

The table below compares the 2009 Budget to the 2008 Budget for this program along with 3Q 2008 YTD actual results. The table does show that all of the benefit cost ratios are above 1.0.

Thermwise Business Rebate Program					
Dollars in Thousands					
	2008	2008	2009	% 2009 Budget	
	3Q Actual	YTD	Approved Budget	Proposed Budget	Over 2008 Budget
Customer Rebates	\$	370	\$ 219	\$ 394	79.9%
Program Costs	\$	81	\$ 283	\$ 343	21.2%
Total Costs	\$	451	\$ 502	\$ 737	46.8%
Projected Ann Dth Savings (1)		32,797	25,962	49,239	89.7%
Participants		646	820	1,364	66.3%
Total Budget \$ / First Year Dth Savings (\$		13.75	\$ 24.17	\$ 18.71	-22.6%
Toal Resource Cost Test B/C		4.9	2.5	3.0	
Participants Test B/C		4.5	3.2	3.4	
Utility Test B/C		8.2	4.0	5.0	
Rate Payer Impac Test B/C		4.2	2.7	3.2	

(1) Actual & \$/Dth Savings expressed on an 80% net to gross ratio

THERMWISE WEATHERIZATION REBATES PROGRAM

This program offers residential customers rebates for installing qualifying weatherization measures. There are no changes in measures in the 2009 plan. The weatherization measures are customer initiated and the program is administered by Nexant with rebates mailed back to the participants. The 2009 budget is \$4.923 million of which \$4.266 million is based on participation levels.

The table below compares the 2009 Budget to the 2008 Budget for this program along with 3Q 2008 YTD actual results. The table does show that all of the benefit cost ratios are above 1.0.

Thermwise Residential Weatherization Program

Dollars in Thousands

	2008 3Q Actual YTD	2008 Approved Budget	2009 Proposed Budget	% 2009 Budget Over 2008 Budget
Customer Rebates	\$ 4,103	\$ 590	\$ 4,266	623.1%
Program Costs	\$ 310	\$ 193	\$ 657	240.4%
Total Costs	\$ 4,413	\$ 783	\$ 4,923	528.7%
Projected Ann Dth Savings (1)	74,461	14,157	100,272	608.3%
Participants	13,904	2,221	15,746	609.0%
Total Budget \$ / First Year Dth Savings (\$	59.27	69.14	61.37	-11.2%
Toal Resource Cost Test B/C	2.5	2.2	2.5	
Participants Test B/C	2.7	2.8	2.8	
Utility Test B/C	2.8	2.4	2.7	
Rate Payer Impac Test B/C	1.9	1.7	1.9	

(1) Actual & \$/Dth Savings expressed on an 80% net to gross ratio

As is apparent from the data above, this program has far-surpassed the expected level of customer participation and therefore spent substantially more in customer incentives than originally planned. While at first glance such a substantial increase might cause concern, the Division views these results as a sign of success. The results show much greater energy savings than originally forecast. Moreover, the cost per decatherm of savings in 2008 was much lower than projected and as a result, the projected cost per unit of savings has been reduced in the 2009 budget.

THERMWISE HOME ENERGY AUDIT REBATES PROGRAM

The ThermWise Home Energy Audit is jointly administered by Nexant and Questar. There are no changes in the program's measures or processes. The home energy audits can either be an on-site audit conducted by QGC technicians or a mail in audit in which the participant answers questions and receives advice back from QGC. A \$25 fee is charged for the on-site audits. This fee is fully refundable upon participation in any ThermWise energy-efficiency rebate program. In addition, the program will provide certain low-cost energy-efficiency measures at no charge

(or with a rebate in the case of the programmable thermostat for customer installation at the customer's residence).

The 2009 budget is \$648,000 which is a 3% increase over the 2008 budget. \$529,000 is based on projected participation levels, but only represents a 1% increase over the 2008 budget. The largest increase, percentage wise, is in program costs, which is \$119,000.

The table below compares the 2009 Budget to the 2008 Budget for this program along with 3Q 2008 YTD actual results. The table shows that most of the benefit cost ratios are above 1.0. The RIM test is below 1.0 for the 2009 plan. Even though some of the benefit cost ratios are at or below 1.0, this is an important program and should be retained because many of the appliance upgrades and weatherization measures implemented by customers (for which incentives are received through other DSM programs) are taken as a result of their identification in home audits. This program has benefits beyond those seen in the data below as it introduces customers to the potential savings they may realize by implementing additional energy efficiency measures.

Thermwise Residential Home Energy Audit Program				
Dollars in Thousands				
	2008	2008	2009	% 2009 Budget
	3Q Actual YTD	Approved Budget	Proposed Budget	Over 2008 Budget
Customer Rebates	\$ 34	\$ 43	\$ 33	-23.3%
Program Costs	\$ 362	\$ 588	\$ 615	4.6%
Total Costs	\$ 396	\$ 631	\$ 648	2.7%
Projected Ann Dth Savings (1)	6,868	13,074	12,124	-7.3%
Participants	1,966	3,593	3,593	0.0%
Total Budget \$ / First Year Dth Savings (1)	\$ 57.66	\$ 60.33	\$ 66.81	10.7%
Toal Resource Cost Test B/C	1.3	1.2	1.0	
Participants Test B/C	18.0	19.1	24.5	
Utility Test B/C	1.1	1.2	1.0	
Rate Payer Impac Test B/C	1.0	1.0	0.8	

(1) Actual & \$/Dth Savings expressed on an 80% net to gross ratio

LOW INCOME WEATHERIZATION ASSISTANCE PROGRAM

Part of the agreement reached in Docket 05-057-T01 contained the provision for QGC to increase the funding by \$250,000 for the state's Low Income Weatherization Program. The 2009 budget increases the funding of this program by another \$250,000 for a total contribution of \$500,000 to this program's DSM budget. The Division feels this is a justifiable increase as it helps low income improve their gas energy savings efficiency as well as increases those customers' safety. The program also should be viewed as part of the overall suite of DSM programs. This program does not drive the overall benefit cost ratio below the break-even point.

THERMWISE MULTI-FAMILY REBATES PROGRAM

The Thermwise Multi-Family rebates program was added as a new program in the 2008 budget. This program targets both new and existing multi-family projects and remains unchanged from the 2008 budget. PECO continues to administer this program.

The 2009 budget for this program is \$2.091 million, a 21% increase from the 2008 budget. The program costs have increased 30% over the 2008 budget and the costs per decatherm saved are much higher than any other program. This is a concern, but this program is still a developing program and more time may be needed before any real conclusions can be made. Because there are no equivalent programs offered by Rocky Mountain Power to this market segment, program development has been somewhat slower than in other sectors.

The table below compares the 2009 Budget to the 2008 Budget for this program along with 3Q 2008 YTD actual results. The table does show that all of the benefit cost ratios are above 1.0 for the 2009 plan year.

Thermwise Multi-Family Rebates Program

Dollars in Thousands

	2008	2008	2009	% 2009 Budget
	3Q Actual YTD	Approved Budget	Proposed Budget	Over 2008 Budget
Customer Rebates	\$ 144	\$ 872	\$ 973	11.6%
Program Costs	\$ 389	\$ 862	\$ 1,118	29.7%
Total Costs	\$ 533	\$ 1,734	\$ 2,091	20.6%
Projected Ann Dth Savings (1)	2,846	23,300	26,273	12.8%
Participants	648	2,990	3,309	10.7%
Total Budget \$ / First Year Dth Savings (1)	\$ 187.28	\$ 93.03	\$ 99.48	6.9%
Toal Resource Cost Test B/C	0.7	1.4	1.3	
Participants Test B/C	2.0	2.5	2.5	
Utility Test B/C	0.8	1.6	1.5	
Rate Payer Impac Test B/C	0.7	1.3	1.2	

(1) Actual & \$/Dth Savings expressed on an 80% net to gross ratio

It should be noted (based upon QGC's 3rd quarter report for the program) that of the 648 YTD participants through the 3Q 2008, 622 occurred during the third quarter. This suggests that the program has begun to take hold in this market. The Company also indicates there is a much greater interest in this program than what currently is reflected.

THERMWISE BUSINESS CUSTOM REBATES PROGRAM

This is the second year of this program. This program is a customer initiated program and is administered by Nexant. The 2009 budget had been reduced by 40% from the 2008 budget due to expected lower participation.

The table below compares the 2009 budget to the 2008 budget. There have been no incentive payments made for this program through the 3Q of 2008. The table does show that all of the benefit cost ratios are above 1.0 for the 2009 plan year.

Thermwise Business Custom Rebates Program

Dollars in Thousands

	2008	2008	2009	% 2009 Budget
	3Q Actual YTD	Approved Budget	Proposed Budget	Over 2008 Budget
Customer Rebates	\$ -	\$ 154	\$ 75	-51.3%
Program Costs	\$ 43	\$ 335	\$ 220	-34.3%
Total Costs	\$ 43	\$ 489	\$ 295	-39.7%
Projected Ann Dth Savings (1)	0	15,395	7,513	-51.2%
Participants	0	50	15	-70.0%
Total Budget \$ / First Year Dth Savings (1)	\$ -	\$ 39.70	\$ 49.08	23.6%
Toal Resource Cost Test B/C	0.0	1.4	1.8	
Participants Test B/C	0.0	2.7	5.2	
Utility Test B/C	0.0	1.9	1.9	
Rate Payer Impac Test B/C	0.0	1.6	1.5	

(1) Actual & \$/Dth Savings expressed on an 80% net to gross ratio

In evaluating this program, it should be noted that project development times are much longer than the prescriptive incentive payments. This program requires pre-installation engineering studies, negotiated contracts and implementation of the recommended energy saving measures before rebates are paid to the customers. In communication with the Division, the Company indicates that two major projects are in-process, while others are under investigation. Participants in this program are expected to be relatively few, but each project is expected to yield large decatherm savings. There is thus an even greater potential energy savings than what is currently projected. This program is designed to be coordinated with RMP FinAnswer Program. Along these lines, QGC is moving to make engineering studies available at no-or-low-cost to customers, thus removing a perceived barrier to participation. The Division recommends that the program be permitted to continue until representative results are available for analysis.

VARIABLE PARTICIPATION COSTS

These programs all have “variable” costs associated with them due to the level of customer participation. The Division feels that these programs are important in raising the awareness of QGC’s GS-1 and GSS customers to the importance of conserving energy, not only for their impact on their bills but as measures which may dampen total demand. This decreases the need to purchase non-Company gas, thus reducing marginal prices for all customers. One cost consideration of this application is the category under Market Transformation Costs. The first

year costs were budgeted at \$911,000, the second year budget at \$1.2 million. The 2009 Market Transformation budget is 1.266 million, a 3% increase. These costs are a necessary part of the overall program in order to effectively continue to raise the awareness of customers to the importance of conservation. The Division is cognizant of the fact that this is an area where close scrutiny of these expenditures measured against the impact of program awareness will be of great importance.

SUMMARY AND RECOMMENDATION

This 2009 budget application represents the third year of a three year pilot program and the full effect of these programs will not be known until the pilot program is complete and a summary evaluation report by the Cadmus Group is completed and filed with the Division after the conclusion of the DSM pilot program time period. During the interim, the Division will monitor these programs and may make recommendations to the PSC to alter the course of some, if not all, of the programs mentioned within this application.

The Division supports the 2009 DSM budget as outlined in the Application and recommends approval by the Commission. Another recommendation the Division wishes to make is to have the Company review the current cost allocation practices the Company uses in the allocation of Company overhead costs to the various program measures. The current practice of allocating an equal amount to each program may overstate the benefit of some well performing programs while understating the benefit of some of the under performing programs. On an overall plan basis it will not make any difference. The Division does commend QGC for their commitment to a strong DSM program and looks forward to the report of the Cadmus Group as they begin to evaluate the effectiveness of QGC's DSM pilot program.

Cc: Questar Gas Company
Committee of Consumer Services
Rea Petersen
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