



Energy Efficiency Program Proposal

ThermWise[®] Home Energy Audit
Program

Program Overview

Description

The ThermWise® Home Energy Audit Program targets separately metered residences receiving service on the GS residential rate schedule. The home energy audit includes two separate delivery channels. Customers will be able to request a self-completed mail-in audit survey at no charge, or may request that a Questar Gas Company (Questar Gas) technician come to their home and conduct an in-home audit. Questar Gas will require customers to pay a \$25 fee per residence for the in-home audit; the fee is added to the customer's Questar Gas bill. This fee is fully refundable upon implementation of any qualifying Questar Gas energy-efficiency rebate measure, by way of a credit to the customer's Questar Gas bill.

With both home energy audits (in-home or mail-in), participating customers will receive a customized report recommending home improvements that can be implemented to reduce natural gas usage. During the audit and based on need, Questar Gas will offer certain energy-efficiency measures identified in Table 1 at no charge.

The company is currently reviewing the audit process. The goal of the review is to examine ways to increase customer participation and provide those customers participating with more updated information and an actionable energy efficiency plan. If instituted the recommended changes would not alter the general framework of the audit program as outlined above but merely expand on and enhance the elements already in place.

Program Design

Program Measures

Qualifying Customers

Separately metered existing residences in Questar Gas Utah service territory that are billed on a GS residential rate schedule are eligible to participate in the ThermWise® Home Energy Audit program.

Measure Eligibility

Table 1 lists the low-cost energy-efficiency measures and eligibility requirements under the audit program.

Table 1. Audit Energy-Efficiency Measures

	Pipe Insulation	Kitchen Sink Aerator	Faucet Aerator	Low Flow Shower Head	Programmable Thermostat ⁷
Baseline requirement	Gas water heater, no pipe insulation	Gas water heater, ≥ 2.75 GPM	Gas water heater, ≥ 2.75 GPM	Gas water heater, ≥ 3.0 GPM	Existing home with gas heat and existing non-programmable thermostat
Minimum efficiency requirements	First 4ft HW, first 2 ft CW	< 2.0 GPM	< 2.0 GPM	< 2.5 GPM	Shall have at least two different programming periods (for weekday and weekend programming) and at least four possible temperature settings (i.e., wake, day, evening and sleep settings).
Measure lifetime (yrs)	10	10	10	10	15

⁷ Programmable thermostat will only be available to customers where a Questar Gas in-home audit is completed.

Program Rebates

Audit related energy-efficiency measures are outlined below in Table 2. These measures will be provided by Questar Gas during home-energy audits when eligibility requirements are met.

Table 2. Audit Energy Efficiency Measures

Program Measure	QGC Provided	QGC Installed	Incentive \$
Pipe Insulation	Yes	No	N/A
Kitchen Sink Aerator	Yes	No	N/A
Faucet Aerator	Yes	No	N/A
Low Flow Shower Head	Yes	No	N/A
Programmable Thermostat	No	No	\$30

Rebate Limitations

No-charge energy efficiency measures are provided only to customers eligible to receive them based on the need determined during the audit.

Each In-home audit will include a blower door test to determine eligibility for weatherization air sealing measures. A premise that has received an audit in the past will be eligible for a blower door test to determine air sealing eligibility but customer will be charged a \$25 audit fee.

Projected Participants

Table 3 summarizes the projected number of audits that will be conducted under the program.

Table 3. 2011 Audit Participants

Program Year	On-site Audits	Mail-in Audits	Total
2012	2,680	1,093	3,773

Customer Participation Process

Mail-In Audits

Customers should be able to complete the mail-in audit within 30 to 60 minutes. The process will require customers to walk around their homes and collect information about natural gas-consuming appliances and

equipment (e.g., number, location, size, model number, etc.) as well as building shell information, but will not require any special equipment, skills or detailed measurements to be taken.

Information from completed and returned surveys will be used to prepare a customized audit report for the customer. The report will contain the estimated breakdown of natural gas consumption by major end-use calibrated to the customer's past usage history if available. The report will also contain a prioritized list of recommended energy efficiency measures that the customer should implement, based on estimated cost, payback and complexity. Where applicable, information on how to apply for available rebates from Questar Gas will also be included.

Customers who have taken advantage of the mail-in audit must request a blower door test in order to be eligible for air sealing measures. Questar Gas will make every effort to explain to customers the difference between the mail-in audit and the in-home audit. As stated earlier, the company is actively working with our implementation contractor on recommended updates and envisions the mail-in audit becoming an online tool for customers that coordinates with their individualized ThermWise Home Energy Comparison Report.

In-Home Audits

Questar Gas customers requesting an In-Home audit from one of Questar Gas's audit technicians may be required to complete a basic questionnaire (e.g., customer information, usage patterns, etc.). If the number of In-Home audit requests exceed Questar Gas's ability to complete them in a timely manner, customers may be screened and prioritized based on age of house, natural gas usage, size of house, age of appliances, eligibility for weatherization assistance, ability to complete the Mail-In audit process or other metrics identified by Questar Gas.

The In-Home audit process will collect and/or augment the following customer information:

- Building shell information (e.g., insulation levels, window types and sizes, conditioned square footage, etc.)
- Gas appliance information (e.g., number, type, age, size, etc.)
- Heating system information (e.g., age, size, model number, nameplate efficiency, etc.)
- Usage patterns (e.g., temperature set points, number of occupants, etc.)
- Primary infiltration reduction opportunities identified by visual inspection and blower door testing (e.g., sealing windows, doors, electrical outlets, plumbing vents, fireplace dampers, etc.)

Rebate Application Process

See Application (Section VI. 2012 Rebate Processing) for information regarding rebate applications and processing.

Projected Savings

Table 4 presents the estimated gross customer savings.

Table 4. Audit Energy Efficiency Measure Gross Savings Estimates (Dth/yr)

Program Year	Pipe Insulation	Kitchen Faucet Aerator	Faucet Aerator	Low Flow Shower Head	Programmable Thermostat	Total
Unit	system	each	each	each	each	
Unit Savings (Dth/unit/yr)	1.40	1.32	.44	5.79	2.66	
Quantity	2,568	1,500	1,200	961	84	
Annual Savings	3,595	1980	528	5,564	223	11,890

Implementation

The Program is currently in the marketplace so all existing implementation activities will continue without delay upon Commission approval effective January 1, 2012. Upon approval, the In-Home audit will include a blower door test on each premise as part of the air sealing pilot measure. The test will allow Auditors the opportunity to identify and recommend air sealing to those customers that may benefit the most from the measure. Other components of the audit may change slightly based on any program redesign recommendations but basic framework will remain unchanged. Questar Auditors will continue to recommend other measures that have the potential to increase energy efficiency. It is estimated that an additional 20 minutes would be required to complete a blower door test over and above the current time required now to complete the In-Home audit. This is a great opportunity to offer a valuable service to customers, expand the resources available to customers and offer additional energy savings measures.

Administration

The program administration represents the on-going delivery of the program. All internal systems, processes and procedures have been created and are in place. Some modifications may be required due to program changes for 2012.