
Energy Efficiency Program Proposal

ThermWise[®] Business Rebates Program

Program Overview

Description

The ThermWise Business Rebate program is a comprehensive program that offers rebates to Questar Gas Company (Questar Gas or the Company) GS commercial customers, through a contracted program administrator, Nexant, Inc. (Nexant). Rebates are available for purchasing and installing qualifying natural gas-efficiency measures in commercial units. Qualifying measures include those that target cost-effective natural gas savings including retrofits of existing systems and first time installations. Rebates will be paid directly to participating customers.

Program measures include high-efficiency space and water-heating applications, high-efficiency clothes washers, high-efficiency gas unit heaters, gas infrared heaters, boiler controls and tune-ups, food service equipment, building shell and weatherization measures.

The program is designed to leverage the marketing access and existing delivery channels of local businesses, wholesalers and retailers. Primary program delivery functions have been contracted to Nexant. Questar Gas will support the program delivery by identifying customer installation opportunities, marketing activities and assisting customers with program requirements where applicable.

Program Design

Program Measures

Qualifying Customers

Commercial customers in Questar Gas' Utah service territory and billed on a GS rate schedule are eligible to participate in the ThermWise Business Rebates program.

Measure Eligibility

Table 1 lists the ThermWise Business Rebates program's energy-efficiency measures and the corresponding size and eligibility requirements for each.

Table 1. Business Energy Efficiency Measures

Measure	Size Category	Minimum Efficiency Requirements
High-Efficiency Gas Storage Water Heater - Tier 1	≤ 75,000 Btu/hr input	≥ 0.62 EF
High-Efficiency Gas Storage Water Heater - Tier 2	≤ 75,000 Btu/hr input	ENERGY STAR Qualified
High-Efficiency Gas Storage Water Heater - Tier 3	> 75,000 Btu/hr input	Thermal Efficiency ≥ 82%
High-Efficiency Tankless Gas Water Heater	< 200,000 Btu/hr input	≥ 0.82 EF
	≥ 200,000 Btu/hr input	Thermal Efficiency ≥ 82%
High-Efficiency Clothes Washer	Residential Clothes Washer Used in a Business	MEF of 2.6 or greater
	ENERGYSTAR Commercial High Efficiency Clothes Washer (Coin-op/Laundromat)	MEF of 2.0 or greater, and WF of 6.0 or less
Low Flow Pre-Rinse Spray Valve	N/A	≤ 1.6 GPM (retrofit only)
High-Efficiency Gas Furnace	N/A	AFUE of 90% or greater
		AFUE of 92% or greater
		AFUE of 95% or greater
High Efficiency Gas Pack in Roof Top Unit	N/A	AFUE or Thermal Efficiency ≥ 88%
Gas Boiler (hot water)	< 300,000 Btu/hr input	AFUE ≥ 85%
	≥ 300,000 Btu/hr input	Thermal Efficiency ≥ 90%
Gas Boiler (steam)	< 300,000 Btu/hr input	AFUE ≥ 85%
	≥ 300,000 Btu/hr input	Thermal Efficiency ≥ 82%
Direct Contact Gas Water Heater	All	Thermal Efficiency ≥ 90%
High-Efficiency Gas Unit Heater (Non Condensing)	N/A	Thermal Efficiency 83% - 89%
High-Efficiency Gas Unit Heater (Condensing)		Thermal Efficiency ≥ 90%
Gas Infrared Heating System	N/A	Infrared Heating System (must replace existing natural gas non-infrared heating systems or be installed as part of new construction project)
Boiler Outside Air Reset Control	N/A	Boiler Outside Air Reset Control

Measure	Size Category	Minimum Efficiency Requirements
Gas Boiler Tune-up	Existing natural gas boiler	Perform a qualifying tune-up that complies with the boiler tune-up program requirements and yields an improvement in combustion efficiency (Only one tune-up rebate per boiler within a 2-year period)
Gas Commercial Fryer	N/A	ENERGY STAR Qualified
Gas Steam Cooker	N/A	ENERGY STAR Qualified
High Efficiency Gas Convection Oven	N/A	ENERGY STAR Qualified
High Efficiency Gas Combination Oven	N/A	40% Cooking Efficiency
High Efficiency Gas Griddle	N/A	ENERGY STAR Qualified
Building Shell (New Construction) Windows	Site-Built Window	U-value of 0.30 or less (Glazing Only Rating)
	Pre-fabricated Window Assembly	U-value of 0.30 or less (Entire Window Assembly Rating)
Building Shell (New Construction) - Roof Insulation	N/A	Incremental addition of R-5 or higher above code
Building Shell (New Construction) - Wall Insulation	N/A	Incremental addition of R-3.7 continuous insulation or higher above code
Building Shell (Retrofit) - Windows	Site-Built Window	U-value of 0.30 or less (Glazing Only Rating)
	Pre-fabricated Window Assembly	U-value of 0.30 or less (Entire Window Assembly Rating)
Building Shell (Retrofit) - Roof Insulation	N/A	Incremental addition of R-10
Building Shell (Retrofit) - Wall Insulation	N/A	Incremental addition of R-10
High-Efficiency Condensing Gas Storage Water Heater	$\leq 75,000$ Btu/hr input	ENERGY STAR Qualified
Hybrid Gas Storage Water Heater	$\geq 75,000$ Btu/hr input	Thermal Efficiency of 90% or greater

Program Rebates

Table 2 lists the ThermWise® Business Rebate program's incentive levels and estimated incremental customer costs for each energy-efficiency measure. Incentive levels and incremental customer costs are shown by either unit or per connected-equipment input shown in terms of kBtu to allow for a more customized offering per customer application.

Table 2. Energy Efficiency Measure Incentives and Incremental Customer Costs

Measure	Size Category	Minimum efficiency requirements	Unit	Rebate (\$/unit)	Incremental customer cost (\$/unit)
High-Efficiency Gas Storage Water Heater Tier 1	≤ 75,000 Btu/hr input	≥ 0.62 EF	unit	\$50	\$100
High-Efficiency Gas Storage Water Heater Tier 2	≤ 75,000 Btu/hr input	ENERGY STAR Qualified	Unit	\$100	\$400
High-Efficiency Gas Storage Water Heater	> 75,000 Btu/hr input	≥ 82% Thermal Efficiency	kBtu/hr Input	\$2	\$6.78
High-Efficiency Tankless Gas Water Heater	< 200,000 Btu/hr input	≥ 0.82 EF	kBtu/hr Input	\$2	\$4.24
	≥ 200,000 Btu/hr input	≥ 82% Thermal Efficiency	kBtu/hr Input	\$2	\$4.24
High-Efficiency Clothes Washer	Residential Clothes Washer Used in a Business	MEF of 2.6 or greater	unit	\$50	\$120
	ENERGYSTAR Commercial High Efficiency Clothes Washer (Coin-op/Laundromat)	MEF of 2.0 or greater, and WF of 6.0 or less	unit	\$75	\$300
Low Flow Pre-Rinse Spray Valve	N/A	≤ 1.6 GPM (retrofit only)	unit	\$25	\$50
High-Efficiency Gas Furnaces	N/A	AFUE of 90% or greater	unit	\$200	\$675
		AFUE of 92% or greater	unit	\$300	\$777
		AFUE of 95% or greater	unit	\$400	\$876
High-Efficiency Gas Roof-Top Furnace	N/A	AFUE or Thermal Efficiency ≥ 88%	kBtu/hr Input	\$5	\$11
Gas Boilers (hot water)	< 300,000 Btu/hr input	AFUE ≥ 85%	kBtu/hr Input	\$2	\$5.08
	≥ 300,000 Btu/hr input	Thermal Efficiency ≥ 90%	kBtu/hr Input	\$3.25	\$6.50
Gas Boilers (steam)	< 300,000 Btu/hr input	AFUE ≥ 85%	kBtu/hr Input	\$2	\$5.08
	≥ 300,000 Btu/hr input	Thermal Efficiency ≥ 82%	kBtu/hr Input	\$2	\$5.08
Direct Contact Gas Water Heater	All	Thermal Efficiency ≥ 90%	kBtu/hr Input	\$1.10	\$2.17
High-Efficiency Gas Unit Heater	N/A	Thermal Efficiency 83% - 89%	kBtu/hr Input	\$1.25	\$2.50
		Thermal Efficiency ≥ 90%	kBtu/hr Input	\$6	\$12

Measure	Size Category	Minimum efficiency requirements	Unit	Rebate (\$/unit)	Incremental customer cost (\$/unit)
Gas Infrared Heating System	N/A	Infrared Heating System (must replace existing natural gas non-infrared heating systems or be installed as part of new construction project)	kBtu/hr Input	\$5	\$11.43
Boiler Outside Air Reset Control	N/A	Boiler Outside Air Reset Control	Unit	\$250	\$ 835
Boiler Tune-up	Existing natural gas boiler	Perform a qualifying tune-up that complies with the boiler tune-up program requirements and yields an improvement in combustion efficiency (Only one tune-up rebate per boiler within a 2-year period)	Unit	Up to \$300	\$600
Gas Commercial Fryer	N/A	ENERGY STAR Qualified	Unit	\$500 per vat	\$3,796
Gas Steam Cooker	N/A	ENERGY STAR Qualified	Unit	\$1,000 per unit	\$6,221
High Efficiency Gas Convection Oven	N/A	ENERGY STAR Qualified	Unit	\$500 per cavity	\$3,144
High-Efficiency Gas Combination Oven	N/A	40% cooking Efficiency	Unit	\$1,000 per unit	\$21,797
High Efficiency Gas Griddle	N/A	ENERGY STAR Qualified	Unit	\$300 per unit	\$4,575
Building Shell (New Construction) Windows	Site-Built Window	U-value of 0.30 or less (Glazing Only Rating)	Sq. Ft.	\$0.28	\$0.55
	Pre-fabricated Window Assembly	U-value of 0.30 or less (Entire Window Assembly Rating)	Sq. Ft.	\$0.28	\$0.55
Building Shell (New Construction) Attic Insulation	N/A	Incremental addition of R-5 or higher above code	Sq. Ft.	\$0.04	\$0.07
Building Shell (New Construction) Wall Insulation	N/A	Incremental addition of R-3.7 continuous insulation or higher above code	Sq. Ft.	\$0.03	\$0.06
Building Shell (Retrofit) Windows	Site-Built Window	U-value of 0.30 or less (Glazing Only Rating)	Sq. Ft.	\$0.37	\$0.55
	Pre-fabricated Window Assembly	U-value of 0.30 or less (Entire Window Assembly Rating)	Sq. Ft.	\$0.37	\$0.55
Building Shell (Retrofit) Attic Insulation	N/A	Incremental addition of R-10	Sq. Ft.	\$0.16	\$0.40
Building Shell (Retrofit) Wall Insulation	N/A	Incremental addition of R-10	Sq. Ft.	\$0.12	\$0.64
High-Efficiency Condensing Gas Storage Water Heater	≤ 75,000 Btu/hr input	ENERGY STAR Qualified	Unit	\$350 per unit	\$1,150

Measure	Size Category	Minimum efficiency requirements	Unit	Rebate (\$/unit)	Incremental customer cost (\$/unit)
Hybrid Gas Storage Water Heater	≥ 75,000 Btu/hr input	Thermal Efficiency of 90% or greater	Unit	\$350 per unit	\$1,238

Rebate Limitation

The following requirements apply to rebate application payments for the program:

- Customers may receive only one (1) boiler tune-up rebate per boiler for the period of two years.
- Measures which are required by code are not eligible for rebates through the Business Rebates Program. Customers may be required to document that their installation exceeds code requirements prior to receiving a rebate.
- Rebates for infrared heating systems must replace existing natural gas non-infrared heating systems or be installed as part of a new construction project.
- Energy performance of window assemblies and glazing products must be rated in accordance with NFRC. Skylights are not eligible to receive incentives. Site-built window systems must have a non-metal frame or include a thermal break within the frame to qualify for rebates.
- Rebates for retrofit installations of wall and roof insulation apply only to the first increment of R-10 insulation added to the wall or floor. Additional increments of R-10 beyond the first are not eligible to receive an incentive.
- Qualifying measures receiving rebates under the program may not receive equipment purchase and installation rebates under any other Questar Gas energy efficiency program.
- Business units must be located in Questar Gas' Utah service territory and be a Questar Gas commercial GS customer (i.e. meter set or account activated).
- Each rebate will be mailed to the mailing address listed on the Questar Gas customer account.
- Each rebate check will be made payable to the Questar Gas customer account name on record, not necessarily the name provided by the customer in the rebate application.

Projected Participants

Table 3 summarizes the ThermWise® Business Rebate program's expected customer participation for each measure.

Table 3. Program Participants

Measure	Size Category	Minimum efficiency requirements	Participation 2012
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Measure	Size Category	Minimum efficiency requirements	Participation 2012
High-Efficiency Gas Storage Water Heater Tier 1	≤ 75,000 Btu/hr input	≥ 0.62 EF	2
High-Efficiency Gas Storage Water Heater Tier 2	≤ 75,000 Btu/hr input	ENERGY STAR Qualified	1
High-Efficiency Gas Storage Water Heater	> 75,000 Btu/hr input	Thermal Efficiency ≥ 82%	15
High-Efficiency Tankless Gas Water Heater	< 200,000 Btu/hr input	EF of 0.82 or greater	29
	≥ 200,000 Btu/hr input	Thermal Efficiency ≥ 82%	15
High-Efficiency Clothes Washer	Residential Clothes Washer Used in a Business	MEF of 2.6 or greater	2
	ENERGY STAR Commercial High Efficiency Clothes Washer (Coin-op/Laundromat)	MEF of 2.0 or greater, and WF of 6.0 or less	2
Low Flow Pre-Rinse Spray Valve	N/A	≤1.6 GPM (retrofit only)	15
High-Efficiency Gas Furnace	N/A	AFUE of 90% or greater	1
		AFUE of 92% or greater	77
		AFUE of 94% or greater	220
High-Efficiency Gas Roof-Top Furnace	N/A	AFUE or Thermal Efficiency of ≥ 88%	2
Gas Boiler (hot water)	< 300,000 Btu/hr input	AFUE ≥ 85%	20
	≥ 300,000 Btu/hr input	Thermal Efficiency ≥ 90%	22
Gas Boiler (steam)	< 300,000 Btu/hr input	AFUE ≥ 85%	2
	≥ 300,000 Btu/hr input	Thermal Efficiency ≥ 82%	2
Direct Contact Gas Water Heater	N/A	Thermal Efficiency ≥ 90%	2
High-Efficiency Gas Unit Heater	N/A	Thermal Efficiency 83% - 89%	400
		Thermal Efficiency ≥ 90%	120
Gas Infrared Heating System	N/A	Infrared Heating System (must replace existing natural gas non-infrared heating systems or be installed as part of new construction project)	300
Boiler Outside Air Reset Control	N/A	Boiler Outside Air Reset Control	52
Boiler Tune Up	Existing natural gas boiler	Perform a qualifying tune-up that complies with the boiler tune-up program requirements and yields an improvement in combustion efficiency (Only one tune-up rebate per boiler within a 2-year period)	69
Gas Commercial Fryer	N/A	ENERGY STAR Qualified	10
Gas Steam Cooker	N/A	ENERGY STAR Qualified	5
High-Efficiency Gas Convection Oven	N/A	ENERGY STAR Qualified	15
High-Efficiency Gas Combination Oven	N/A	40% Efficiency Cooking	14
High-Efficiency Gas Griddle	N/A	ENERGY STAR Qualified	8
Building Shell (New Construction) Windows	Site-Built Window	U-value of 0.30 or less (Glazing Only Rating)	0
	Pre-fabricated Window Assembly	U-value of 0.30 or less (Entire Window Assembly Rating)	5

Measure	Size Category	Minimum efficiency requirements	Participation 2012
Building Shell (New Construction) Attic Insulation	N/A	Incremental addition of R-5 or higher above code	55
Building Shell (New Construction) Wall Insulation	N/A	Incremental addition of R-3.7 continuous insulation or higher above code	3
Building Shell (Retrofit) Windows	Site-Built Window	U-value of 0.30 or less (Glazing Only Rating)	0
	Pre-fabricated Window Assembly	U-value of 0.30 or less (Entire Window Assembly Rating)	2
Building Shell (Retrofit) Attic Insulation	N/A	Incremental addition of R-10	385
Building Shell (Retrofit) Wall Insulation	N/A	Incremental addition of R-10	22
High-Efficiency Condensing Gas Storage Water Heater	≤ 75,000 Btu/hr input	ENERGY STAR Qualified	5
Hybrid Gas Storage Water Heater	≥ 75,000 Btu/hr input	Thermal Efficiency of 90% or greater	5
Total			1,904

Rebate Application Process

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

Projected Savings

Table 4 presents the ThermWise® Business Rebate program deemed annual savings per measure and the estimated total program savings (based on participation) for each measure.

Table 4. Business Measure Savings Estimates (Dth/yr)

Measure	Size Category	Minimum Efficiency Requirement	Deemed Annual Savings (Dth/installation)	Total Savings (Annual Dth)
High-Efficiency Gas Storage Water Heater Tier 1	≤ 75,000 Btu/hr input	≥ 0.62 EF	1.23	2
High-Efficiency Gas Storage Water Heater Tier 2	≤ 75,000 Btu/hr input	ENERGY STAR Qualified	3.70	4
High-Efficiency Gas Storage Water Heater	> 75,000 Btu/hr input	Thermal Efficiency ≥ 82%	.175 kBtu/hr	3,938
High-Efficiency Tankless Gas Water Heater	< 200,000 Btu/hr input	Efficiency Factor of 0.82 or greater	.141 kBtu/hr	465
	≥ 200,000 Btu/hr input	Efficiency ≥ 82%	.141 kBtu/hr	444
High-Efficiency	Residential Clothes Washer Used in a	MEF of 2.6 or greater	1.74	3

Measure	Size Category	Minimum Efficiency Requirement	Deemed Annual Savings (Dth/installation)	Total Savings (Annual Dth)
Clothes Washer	Business			
	ENERGY STAR Commercial High Efficiency Clothes Washer (Coin-op/Laundromat)	MEF of 2.0 or greater, and WF of 6.0 or less	2.6	5
Low Flow Pre-Rinse Spray Valve	N/A	≤1.6 GPM (retrofit only)	33.60	504
High-Efficiency Gas Furnaces	N/A	AFUE of 90% or greater	14.20	14
		AFUE of 92% or greater	16.20	1,247
		AFUE of 94% or greater	18.10	3,982
High-Efficiency Gas Furnace in Roof-Top Unit	N/A	AFUE or Thermal Efficiency ≥ 88%	0.062 kBtu/hr	24.8
Gas Boilers (hot water)	< 300,000 Btu/hr input	AFUE ≥ 85%	.18 kBtu/hr	359
	≥ 300,000 Btu/hr input	Thermal Efficiency ≥ 90%	.339 kBtu/hr	5,972
Gas Boilers (steam)	< 300,000 Btu/hr input	AFUE ≥ 85%	.18 kBtu/hr	36
	≥ 300,000 Btu/hr input	Thermal Efficiency ≥ 82%	.074 kBtu/hr	223
Direct Contact Gas Water Heater	N/A	Thermal Efficiency > 90%	.23 kBtu/hr	3,206
High-Efficiency Gas Unit Heater	N/A	83% ≤ Thermal Efficiency < 90%	.06 kBtu/hr	4,857
		Thermal Efficiency ≥ 90%	.17 kBtu/hr	4,479
Gas Infrared Heating System	N/A	Infrared Heating System (must replace existing natural gas non-infrared heating systems or be installed as part of new construction project)	.48 kBtu/hr	8,665
Boiler Outside Air Reset Control	N/A	Boiler Outside Air Reset Control	74.10	3,853
Boiler Tune Up	Existing natural gas boiler	Perform a qualifying tune-up that complies with the boiler tune-up program requirements and yields an improvement in combustion efficiency (Only one tune-up rebate per boiler within a 2-year period)	48.86	3,371
Gas Commercial Fryer	N/A	ENERGY STAR Qualified	40.40	404
Gas Steam Cooker	N/A	ENERGY STAR Qualified	35.30	177
High-Efficiency Gas Convection Oven	N/A	ENERGY STAR Qualified	32.30	485
High-Efficiency Gas Combination Oven	N/A	40% Cooking Efficiency	40.30	564
High-Efficiency Gas Griddle	N/A	ENERGY STAR Qualified	8.80	70
Building Shell (New Construction)- Windows	Site-Built Window	U-value of 0.30 or less (Glazing Only Rating)	.0124 per sq. ft.	0
	Pre-fabricated Window Assembly	U-value of 0.30 or less (Entire Window Assembly Rating)	.0208 per sq. ft.	624
Building Shell (New Construction) - Attic Insulation	N/A	Incremental addition of R-5 or higher above code	.0013 per sq. ft.	1,073
Building Shell (New Construction) - Wall Insulation	N/A	Incremental addition of R-3.7 continuous insulation or higher above code	.0006 per sq. ft.	15

Measure	Size Category	Minimum Efficiency Requirement	Deemed Annual Savings (Dth/installation)	Total Savings (Annual Dth)
Building Shell (Retrofit) - Windows	Site-Built Window	U-value of 0.30 or less (Glazing Only Rating)	.0267 per sq. ft.	0
	Pre-fabricated Window Assembly	U-value of 0.30 or less (Entire Window Assembly Rating)	.0344 per sq. ft.	413
Building Shell (Retrofit) - Attic Insulation	N/A	Incremental addition of R-10	.0031 per sq. ft.	17,903
Building Shell (Retrofit) - Wall Insulation	N/A	Incremental addition of R-10	.004 per sq. ft.	673
High-Efficiency Condensing Gas Storage Water Heater	≤ 75,000 Btu/hr input	ENERGY STAR Qualified	9.2	46
Hybrid Gas Storage Water Heater	≥ 75,000 Btu/hr input	Thermal Efficiency of 90% or greater	10.2	51
			Total	68,152

Implementation

The program is currently in the marketplace so all existing implementation activities will continue without delay upon Commission approval effective January 1, 2012.

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.