

# Energy Efficiency Program Proposal

ThermWise<sup>®</sup> Builder Rebates Program

# **Program Overview**

#### Description

Questar Gas Company (Questar Gas) is proposing to continue the ThermWise Builder Rebates program. The program will be delivered to the market and administered by Questar Gas and its program administrator. The program will be available to residential builders in the Questar Gas Utah service territory and include rebates for installing natural gas energy-efficiency measures in newly constructed single and multifamily residences receiving service on the GS rate schedule. Rebates under the program will be paid directly to the home builder or owner-builder (Builder) or as indicated on the application form for energy efficient construction or for installing specific energy-efficient natural gas measures, including high efficiency natural gas space heating and water heating appliances or solar assisted gas water heating systems.

The program is designed to leverage marketing and delivery directly to Utah home builders through a combination of Questar Gas staff and program implementation staff. Development, implementation, training, support and administration will be provided by Questar Gas in conjunction with our program administrator. All Questar Gas rebates will be available directly to Builders upon completion of program requirements.

# **Program Design**

#### **Program Measures**

#### **Qualifying Customers**

Separately metered single family or multifamily newly constructed residences, in Questar Gas' Utah service territory and billed on the GS rate schedule are eligible to participate in the ThermWise Builder Rebates program.

#### List of Qualified Energy Efficiency Measures

Single Family (1-4 units) and Multifamily (5 or more units)			
Measure	Specification		
Standalone Measures			
High-Efficiency Gas Furnace -Tier 1	AFUE Rating of <u>&gt;</u> 90% < 92%		
High-Efficiency Gas Furnace -Tier 2	AFUE Rating of <u>&gt;</u> 92% < 95%		
High-Efficiency Gas Furnace -Tier 3	AFUE Rating of ≥95%		
High-Efficiency Gas Furnace -Tier 4	AFUE Rating of <u>&gt;95%</u> with Electronically Commutated Motor (ECM)		
High-Efficiency Gas Storage Water Heater - Tier 1	Energy Factor (EF) <u>&gt;</u> .62 < .66		
High-Efficiency Gas Storage Water Heater - Tier 2	Energy Factor (EF) <u>&gt;</u> .67		
High-Efficiency Gas Condensing Storage Water Heater	Energy Factor (EF) of $\geq$ .90 or Thermal Efficiency of $\geq$ 90%		
High-Efficiency Gas Hybrid Water Heater	Energy Factor (EF) of $\geq$ .90 or Thermal Efficiency of $\geq$ 90%		
High-Efficiency Gas Tankless Water Heater - Tier 1	Energy Factor (EF) ≥ .82 ≤ .90		
High-Efficiency Gas Tankless Water Heater - Tier 2	Energy Factor (EF) >.90		
Solar Assisted Gas Water Heating	Active system certified OG- 300 by S R C C		
Residential Gas Boiler - Tier 1	AFUE Rating of <u>&gt;</u> 85% < 95%		
Residential Gas Boiler - Tier 2	AFUE Rating of > 95%		
2009 IECC 2X6 R-20 or code equivalent exterior Walls	R-20 or code equivalent		
R-5 Windows	High performance windows meeting specifications		
Whole home option (must include and qualifying standalone furnace & water heater)			
High Performance Home	Exceed ENERGY STAR Version 3 meet or exceed a HERS score of 50. Include a qualified gas space heating appliance and/or water heater. Field		

	verification and supporting documentation by home energy rater (HERS) must be provided.	
ENERGY STAR Version 3.0	Meet or exceed ENERGY STAR Version 3.0 and include qualified gas space heating appliance and water heater. Field verification and supporting documentation by home energy rater (HERS) must be provided.	
ENERGY STAR Version 2.5	Meet or exceed ENERGY STAR Version 2.5 and include qualified gas space heating appliance and water heater. Field verification and supporting documentation by home energy rater (HERS) must be provided.	
ThermWise Builder Option Package 1 (Builder Cert.)	Builder certifies unit meets IECC 2009 energy code, field verification and includes qualifying space heating appliance and water heater. Supporting documentation by builder must be provided. Includes Class I insulation and TBC.	
ThermWise Builder Option Package 2 (Rater Cert.)	Rater certifies unit meets IECC 2009 energy code field verification and includes qualifying space heating appliance and water heater. Must provide required rater documentation.	

#### **High-Efficiency Gas Furnace**

Builders may receive a rebate for installing a high-efficiency gas furnace. Eligibility requirements are as follows:

- Tier 1, the builder must purchase and install a model with an AFUE Rating of >90% < 92%.
- Tier 2, the builder must purchase and install a model with an AFUE Rating of >92% < 95%.
- Tier 3, the builder must purchase and install a model with an AFUE Rating of >95%.
- Tier 4, the builder must purchase and install a model with an AFUE Rating of >95% with Electronically Commutated Motor (ECM).

#### High-Efficiency Gas Storage Water Heater

Builders may receive a rebate for installing a high-efficiency gas storage water heater. Eligibility requirements are as follows:

- Tier 1, the builder must purchase and install a model with an Energy Factor (EF)  $\geq .62 < .66$ .
- Tier 2, the builder must purchase and install a model with an Energy Factor (EF) ≥.67. Qualifying water heaters will have a minimum of 40 gallons in capacity.

#### High-Efficiency Gas Condensing Storage Water Heater

Builders may receive a rebate for installing a high-efficiency condensing gas storage water heater. To be eligible for a rebate, the builder must purchase and install a model with an Energy Factor (EF) of  $\geq$ .90 or (TE) of  $\geq$  90%.

#### High-Efficiency Gas Hybrid Water Heater

Builders may receive a rebate for installing a high efficiency hybrid gas storage water heater. To be eligible for a rebate, the builder must purchase and install a qualified model with a Thermal Efficiency (EF) of  $\geq$ .90 or (TE) of  $\geq$  90%.

#### **Tankless Gas Water Heater**

Builders may receive a rebate for installing a high-efficiency tankless gas water heater. Eligibility requirements are as follows:

- Tier 1, the builder must purchase and install a model with an Energy Factor (EF)  $\geq .82 \leq .90$ .
- Tier 2, the builder must purchase and install a model with an Energy Factor (EF) >.90.

#### Solar Assisted Gas Water Heating

Builders may receive a rebate for installing solar assisted gas water heating system, certified OG-300 by the Solar Rating and Certification Corporation (SRCC).

#### **High-Efficiency Gas Boiler**

Builders may receive a rebate for installing a high-efficiency gas boiler. Eligibility requirements are as follows:

- Tier 1, the builder must purchase and install a model with an AFUE Rating of > 85% < 95%.
- Tier 2, the builder must purchase and install a model with an EF >90.

#### 2x6 Walls

Builders may receive rebates for installing a 2009 IECC 2x6 R-20 or code equivalents exterior wall. To be eligible builder must certify the installation of qualifying products.

#### **R-5 Windows**

Builders may receive rebates for installing R-5 Windows. To be eligible, builder must purchase and install qualified windows that meet the program requirements as listed on www.windowsvolumepurchase.org.

#### **High Performance Home**

Builders may receive rebates for building a high performance home. To qualify a dwelling must meet or exceed ENERGY STAR Version 3.0 and the home must also meet or exceed a HERS score of 50. Field verification, an ENERGY STAR certificate and documentation verifying the home has met the high performance home requirements will be required from rater before high performance home rebate will be paid.

#### **Energy Star Version 3.0**

Builders may receive rebates for building a dwelling unit that qualifies under ENERGY STAR Version 3.0. Field verification and ENERGY STAR Version 3 compliance certificate by home energy rater (HERS) will be required before ENERGY STAR Version 3 rebate will be paid.

#### **Energy Star Version 2.5**

Builders may receive rebates for building a dwelling unit that qualifies under ENERGY STAR Version 2.5. Field verification and ENERGY STAR Version 2.5 compliance certificate by home energy rater (HERS) will be required before ENERGY STAR Version 2.5 rebate will be paid.

#### ThermWise Builder Option Package 1 - Builder Certified 2009 IECC with TBC

Builders may receive rebates for building a dwelling unit that qualifies under the 2009 IECC. Field verification and builder certification will be required before IECC 2009 builder certified rebate will be paid.

#### ThermWise Builder Option Package 2 - Rater verified 2009 IECC

Builders may receive rebates for building a dwelling unit that qualifies under the 2009 IECC. Field verification and supporting documentation by home energy rater (HERS) will be required before IECC 2009 rater certified rebate will be paid.

#### Multifamily

Builders may receive rebates for building a multifamily property that meets program requirements. The requirements for multifamily projects are the same as those for singlefamily projects. New construction projects that are certified to the ENERGY STAR 2.0 standards and were permitted prior to July 1, 2011 will have incentives paid at the 2011 rate structure during 2012.

#### **Program Rebates**

Builders will be paid the rebates listed below after all completed documentation for the measure is received by the program administrator. A completed rebate application must be submitted within 6 months of the initiation of gas service for the subject dwelling units to be eligible to receive a rebate. The rebate will be paid in the form of a check. Rebates will be sent to the Builder contact listed on the Rebate Application.

Single Family SF (1-4 units) and Multifamily MF (5 or more units)			
Measure	Rebate SF/MF	Incremental Customer Cost SF/MF	
High-Efficiency Gas Storage Water Heater-Tier 1	\$50	\$175	
High-Efficiency Gas Storage Water Heater-Tier 2	\$100	\$400	
High-Efficiency Gas Condensing Storage Water Heater	\$350	\$1,150	
High-Efficiency Gas Hybrid Water Heater	\$350	\$1,238	
High-Efficiency Gas Tankless Water Heater- Tier 1	\$300	\$750	
High-Efficiency Gas Tankless Water Heater- Tier 2	\$350	\$1,345	
High-Efficiency Gas Furnace -Tier 1	\$200	\$520	
High-Efficiency Gas Furnace -Tier 2	\$300	\$520	
High-Efficiency Gas Furnace -Tier 3	\$350	\$956	

High-Efficiency Gas Furnace -Tier 4	\$400	\$956
Residential Gas Boiler – Tier 1	\$400	\$550
Residential Gas Boiler – Tier 2	\$600	\$1,550 \$4,500
Solar Assisted Gas Water Heating (OG 300 by SRCC)	\$750	
2009 IECC 2X6 R-20 or code equivalent exterior Walls	\$350/\$150	\$1,000/\$600
R-5 Windows	\$1.20/ sq. ft.	\$6/ sq. ft.
Whole home option (must include qualifying	standalone furnace &	& water heater)
High Performance Home <ul> <li>Furnace</li> <li>Water heater</li> <li>2x6 wall</li> </ul>	<b>\$500 (SF) /\$300 (MF)</b> \$200-\$400 \$50-\$350 \$350 / \$150	\$5,180/\$4,600
ENERGY STAR Version 3.0 Furnace Water heater 2x6 wall	\$300 (SF) /\$200 (MF) \$200-\$400 \$50-\$350 \$350 / \$150	\$2,700
ENERGY STAR Version 2.5 • Furnace • Water heater • 2x6 wall	<b>\$250 (SF) /\$150 (MF)</b> \$200-\$400 \$50-\$350 \$350 / \$150	\$2,435
<ul> <li>ThermWise Builder Option Package 1 (Builder Cert.)</li> <li>Furnace</li> <li>Water heater</li> <li>2x6 wall</li> </ul>	<b>\$50 (SF) /\$50 (MF)</b> \$200-\$400 \$50-\$350 Optional	\$800/\$450
ThermWise Builder Option Package 2 (Rater Cert.) <ul> <li>Furnace</li> <li>Water heater</li> <li>2x6 wall</li> </ul>	<b>\$100 (SF) /\$100 (MF)</b> \$200-\$400 \$50-\$350 Optional	\$1,000/\$550

#### **Rebate Limitations**

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

- Rebates are limited to one energy-efficient Whole House Certification rebate per qualifying newly constructed, dwelling unit (as further described above under the Qualified Energy Efficiency Measures section) and will be tracked by Builder, meter number and address.
- Builders are eligible to receive rebates for a maximum of two (2) qualifying measures per measure type in each newly constructed, dwelling unit. Builders are only eligible to receive an additional whole home performance option measure if they have installed a qualifying space heating appliance and water heater. They can receive a maximum of two individual measure incentives per home plus one performance measure.
- A complete rebate application must be submitted within 6 months of the initiation of gas service for the subject dwelling unit to be eligible to receive a rebate.

- Qualifying packages and/or measures receiving rebates under the program may not receive equipment purchase and installation rebates under any other Questar Gas Energy Efficiency program.
- Dwelling unit must be located in Questar Gas' Utah service territory.

# **Projected Participants**

Single Family (1-4 units)	& Multifamily (5 or more units)		
Measure	Participants		
	Single Family	Multifamily	
High-Efficiency Gas Furnace -Tier 1	48	47	
High-Efficiency Gas Furnace -Tier 2	101	78	
High-Efficiency Gas Furnace -Tier 3	19	29	
High-Efficiency Gas Furnace -Tier 4	50	2	
High-Efficiency Gas Water Heater-Tier 1	462	16	
High-Efficiency Gas Water Heater-Tier 2	361	99	
High-Efficiency Gas Condensing Storage Water Heater	13	1	
High-Efficiency Gas Hybrid Water Heater	13	1	
High-Efficiency Gas Tankless Water Heater- Tier 1	40	4	
High-Efficiency Gas Tankless Water Heater- Tier 2	26	3	
Solar Assisted Gas Water Heating	14	1	
Residential Gas Boiler - Tier 1	13	1	
Residential Gas Boiler - Tier 2	13	1	
2X6 R-20 Walls	495	33	
R-5 Windows	5	1	
TOTAL	1,673	317	
Whole home option (must include and qualifying standalone furnace & water heater)			
Measure	Participants		
Weasule	Single Family	Multifamily	
High Performance Home	3	1	
ENERGY STAR Version 3.0	425	38	
ENERGY STAR Version 2.5	425	38	
ThermWise Builder Option Package 1 (Builder Cert.)	992	89	
ThermWise Builder Option Package 2 (Rater Cert.)	992	89	
TOTAL	2,837	255	

## **Rebate Application Process**

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

## **Projected Savings**

#### Single Family (1-4 units)

Measure	Annual Savings (Dth)	Participants	Total Annual Gross Savings (decatherms)
High Performance Home	43.20	3	130
ENERGY STAR Version 3.0	30.60	425	13,005
ENERGY STAR Version 2.5	29.20	425	12,410
ThermWise Builder Option Package 1 (Builder Cert.)	17.10	992	16,963
ThermWise Builder Option Package 2 (Rater Cert.)	21.40	992	21,229
High-Efficiency Gas Furnace -Tier 1	8.30	48	398
High-Efficiency Gas Furnace -Tier 2	9.48	101	960
High-Efficiency Gas Furnace - Tier 3	11.20	19	213
High-Efficiency Gas Furnace -Tier 4	11.20	50	560
High-Efficiency Gas Storage Water Heater-Tier 1	1.71	462	790
High-Efficiency Gas Storage Water Heater-Tier 2	3.96	361	1,430
High-Efficiency Gas Condensing Storage Water Heater	9.20	13	120
High-Efficiency Gas Hybrid Water Heater	10.20	13	133
High-Efficiency Gas Tankless Water Heater- Tier 1	8.80	40	352
High-Efficiency Gas Tankless Water Heater- Tier 2	9.60	26	250
Solar Assisted Gas Water Heating	17.50	14	245
Residential Gas Boiler - Tier 1	12.10	13	157
Residential Gas Boiler - Tier 2	16.10	13	209
2X6 R-20 Walls	12.80	495	6,336
R-5 Windows	0.029	5	60
SINGLE FAMILY TOTAL	N/A	4,510	75,949

#### Multifamily (5 or more units)

Measure	Annual Savings (Dth)	Multifamily Participation	Total Annual Gross Savings (decatherms)
High Performance Home	20.70	1	21
ENERGY STAR Version 3.0	14.70	38	559
ENERGY STAR Version 2.5	14.30	38	543
ThermWise Builder Option Package 1 (Builder Cert.)	6.50	89	579
ThermWise Builder Option Package 2 (Rater Cert.)	8.30	89	739
High-Efficiency Gas Furnace -Tier 1	4.60	47	216
High-Efficiency Gas Furnace -Tier 2	5.60	78	437
High-Efficiency Gas Furnace - Tier 3	6.50	29	189
High-Efficiency Gas Furnace -Tier 4	6.50	2	13
High-Efficiency Gas Storage Water Heater-Tier 1	1.70	16	27
High-Efficiency Gas Storage Water Heater-Tier 2	3.96	99	392
High-Efficiency Gas Condensing Storage Water Heater	9.20	1	9
High-Efficiency Gas Hybrid Water Heater	10.20	1	10
High-Efficiency Gas Tankless Water Heater- Tier 1	8.80	4	35
High-Efficiency Gas Tankless Water Heater- Tier 2	9.60	3	29
Solar Assisted Gas Water Heating	17.50	1	18
Residential Gas Boiler - Tier 1	12.08	1	12
Residential Gas Boiler - Tier 2	16.10	1	16
2X6 R-20 Walls	4.00	33	132
R-5 Windows	0.021	1	9
MULTIFAMILY TOTAL	N/A	572	3,983
PROGRAM TOTAL	N/A	5,082	79,932

### Implementation

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