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# Energy Efficiency Program Proposal

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## Residential Appliance Program

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# Program Overview

## Description

Questar Gas Company (Questar Gas) is proposing to offer a Residential Appliance Program to Questar Gas residential GS customers in Utah. This program will be delivered to customers in the Company's Utah service territory and administered by Portland Energy Conservation Inc. (PECI). Monetary incentives will be offered on qualified program measures and mailed to the participating customer upon proof of purchase and/or installation.

Program measures will include high-efficiency space and water-heating appliances, high-efficiency natural gas clothes dryers and ENERGY STAR qualified clothes washers. Incentives for most measures will be available regardless of who installs the product. In some cases, mainly tankless water heaters and high-efficiency furnace installations, incentive payments will require a licensed and pre-qualified contractor perform the work.

The Program will be delivered through local retail and distributor channels. These are many of the same trade allies participating in Rocky Mountain Power's (RMP) Home Energy Savings Program providing the opportunity to leverage implementation resources and coordinate offerings between the programs.

## Objective

The overall objective of this program is to reduce customer natural gas consumption by cost effectively offering monetary incentives to Questar Gas residential customers.

Specific objectives include:

1. Acquire cost-effective savings for Questar Gas GS Customers.
2. Ensure trade allies and residential customers have a positive experience with their participation in the program.

The Residential Appliance Program is one of several initial energy-efficiency programs offered by Questar Gas. The program will seek to increase customer awareness and use of energy-efficient practices and technologies in existing residential homes to achieve cost-effective natural gas savings.

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# Program Design

## Program Measures

### Qualifying Customers

All individually metered residences receiving service on the GS-1 or GSS rate schedules in Questar Gas' Utah service territory are eligible to participate in the program. A qualifying residence is a separately metered dwelling unit in a structure that has up to and including four separately metered residential dwelling units.

## List of Qualified DSM Measures

Measure	Specification
ENERGY STAR Clothes Washer	Consortium for Energy Efficiency (CEE) Tier 1: Modified Energy Factor (MEF) between 1.72 and 1.99 CEE Tier 2: MEF of 2.00 or greater
High-Efficiency Gas Dryer	Moisture sensor installed
High-Efficiency Standard Water Heater	EF 0.63 or greater
Tankless Water Heater	EF 0.80 or greater
High-Efficiency Furnace	Annual Fuel Utilization Efficiency (AFUE) Rating of 90% or greater

### ENERGY STAR Clothes Washer

Customers can receive an incentive for installing an ENERGY STAR qualified clothes washer. To be eligible for CEE Tier 1, the customer must purchase an ENERGY STAR qualified model with a Modified Energy Factor (MEF) between 1.72 and 1.99. CEE Tier 2 eligibility will be for models with an MEF of 2.00 or greater.

### High-Efficiency Gas Dryer

Customers can receive an incentive for installing a gas dryer with a moisture sensor installed. This sensor turns the dryer off, based upon the remaining moisture content of the clothes, reducing drying time.

### High-Efficiency Standard Water Heater

Customers can receive incentives for installing a high-efficiency standard water heater with an EF or 0.63 or greater. Qualifying water heaters will range from 40 to 80 gallons in capacity.

### Tankless Water Heater

Customers can receive incentives for installing a tankless water heater with an EF of 0.80 or greater. This measure must be installed by a qualified contractor.

### High-Efficiency Furnace

Customers can receive incentives for installing a high-efficiency gas furnace with an AFUE rating of 90% or greater.

## Program Incentives

To receive an incentive, customers will complete and submit an application for an incentive payment after they purchase and install a qualifying program measure. Incentive amounts are provided in the table below. These amounts were determined by examining the best available information on incremental costs of the equipment, recognizing the minimum incentive levels necessary to constitute a viable marketing message and overall program cost effectiveness.

Measure	Incentive	Estimated Incremental Customer Cost (\$/unit)
ENERGY STAR Clothes Washer - Tier 1 / Tier 2	\$50 / \$75	\$108 / \$131
High Efficiency Gas Dryer	\$30	\$50
High Efficiency Standard Water Heater	\$50	\$100
Tankless Water Heater	\$300	\$800
High Efficiency Furnace	\$300	\$675

### Incentive Limitations

The following requirements apply for all measures:

- Measures must be installed in residences within the Questar Gas Utah service territory with an active Questar Gas account.
- Measures must be purchased new, not used or leased.
- Monetary incentives will be paid for up to two of each type of measure purchased and installed per separately metered dwelling unit. For example, an incentive will be paid for up to two high-efficiency furnaces and up to two high-efficiency water heaters, etc., purchased and installed per dwelling unit.

## Projected Participants

Measure	Participants
ENERGY STAR Clothes Washer	9,180
High Efficiency Gas Dryer	226
High Efficiency Standard Water Heater	4,052
Tankless Water Heater	41
High Efficiency Furnace	2,000

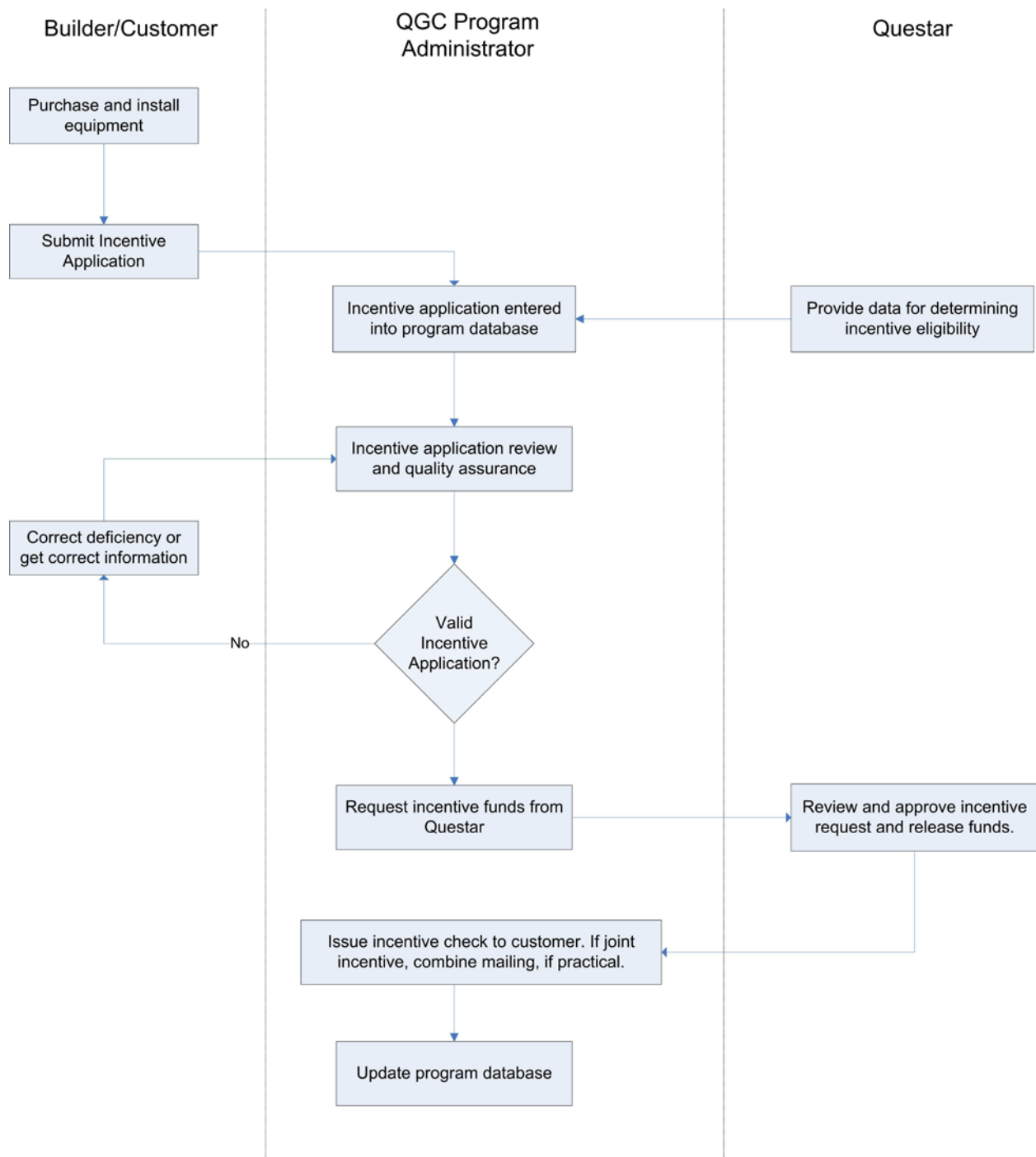
## Customer Application Process

It is the goal of the program to make the incentive application process as simple as possible for customers. To this end, the program administrator will provide self-mailer styled incentive application forms to simplify the process.

### Process Overview

1. **Purchase Appliance** – Customer purchases qualified appliance and receives incentive form.
2. **Appliance Installation** – Appliance is installed according to program installation guidelines by a qualified contractor, if required.
3. **Submittal** – Customer submits the completed incentive form along with a copy of proof of purchase.
4. **Receipt and Data Entry** – Program staff date stamp and enter data into the program database.
5. **Internal Checklist Review** – Data is reviewed for accuracy and qualification according to the following guidelines:
  - Copy of invoice – a copy of the customer invoice is required to verify the validity of the sales and purchase information.
  - Qualified appliance – the appliance must be on the most current version of the ENERGY STAR qualified model list at time of purchase.
  - Date sold – the sale date must be within the valid dates of the promotion.
  - Serial number – the retailer or customer must provide the appliance serial number to prove uniqueness of each sale.
  - Customer verification – customer must assert that they are a residential customer of Questar Gas and sign the incentive form. Utility account numbers will be used to verify this information.
6. **Correction** – If incomplete incentive forms or faulty information is received, customers are contacted immediately in order to correct the application and move it through the review and into the approval stage.
7. **Approval** – Payment for the customer is approved after all information is received, entered, and the project passes the internal checklist review.
8. **Payment** – Payment is issued and sent to the customer and the database is updated with payment information and every effort is made to stay within a 10 business-day turn-around from receipt to payment.

## Customer Application Process



## Marketing & Promotion

To optimize market participation in the program, a strategic marketing plan will be targeted to both the consumer and mid-market actors. A marketing campaign will make customers, retailers and contractors aware of the program and the benefits of purchasing, selling and installing high-efficiency appliances.

In addition, as with all Questar Gas Demand Side Management programs, market transformation education and awareness advertising will incorporate the program into the overall energy-efficiency campaign advertisements and strategies.

### Objectives

- Drive demand and sales of ENERGY STAR qualified appliances and high-efficiency equipment to existing Questar Gas residential customers.
- Raise awareness to consumers about the incentive offers and the benefits of buying high efficiency and ENERGY STAR qualified products.
- Blend program identity and image with other complimentary energy-efficiency programs, all of which convey natural gas savings, quality, and value to the customer.

### Key Messages

To optimize program participation, the marketing campaign will make trade allies and consumers aware of the benefits of purchasing energy-efficient products for their residences. The program will design key messages compatible for both trade allies and consumers depending on the target audience. Key messages include:

#### Consumers

- **Financial Savings** – ENERGY STAR appliances or high-efficiency appliances are a good investment, reducing utility bills every month and offering potential value to a customer's residence.
- **Good for the environment** – Choosing appliances that use less energy helps to decrease demand for energy and water resources.
- **Enhanced Performance** – Appliances that are designed to be energy efficient often have more features, are of improved quality, and perform to overall higher standards by using innovative technologies and designs.

#### Trade Allies

- **Partnership Benefits** – By becoming a trade ally with this program, retailers or installation contractors can take advantage of marketing support, field staff, training opportunities, and technical assistance.
- **Environmental Business** – By offering products and services that promote energy efficiency, trade allies can establish themselves as an environmental business within their industry.
- **Increased Sales** – Today's consumers are becoming more conscious of energy efficiency and are not only more likely to upgrade an old model with a new energy-efficient appliance to enjoy the immediate and long term savings, but are also placing higher value on energy efficiency as a feature in new appliances.

## Target Audiences

Primary: Residential Consumers

Secondary: Trade Allies including retailers and home contractors

## Tools and Resources

**Point of Purchase Materials** – Product clings will promote the offerings throughout the retail store, and clearly mark products that qualify for the incentive to customers.

**Brochure** – A consumer brochure will be created to promote the incentive offerings and educate customers on the benefits of ENERGY STAR and high efficiency products.

**Retail Events** – Partnered retailers will host program sponsored events on location with special offerings on qualified products. Themes could include ENERGY STAR Days, Efficiency Days, Earth Day, etc.

**Cooperative Advertising** – Partnered retailers and contractors will receive funding for their own projects and promotions that promote the program.

**Outreach Events** – The program administrator will provide brochures, staffing and other materials in support of consumer outreach events including home shows and other opportunities.

**Press Packets** – These are created to take advantage of media opportunities and are considered “free” advertising that have greater credibility than placing an advertisement.

**Trade Ally Training Packets** – These will promote program partnership and include reference information to aid trade allies in contacting the program when needed, and will be a “leave behind” after training is completed. Packets will include:

1. Participation letter welcoming trade allies to the program.
2. Incentive forms to provide to customers.
3. Fast facts to aid them in educating their customers on the benefits of the products and the program offerings.

**Website** – Program content will be included in Questar Gas’ DSM website.

## Strategies and Tactics

1. Provide materials with a unified theme and messaging to create a cohesive program across product lines and between retailers and contractors.
2. Make program information and incentive forms easy to access, use and redeem.
3. Educate stakeholders including consumers, retailers and contractors, about the benefits of energy efficient products and services.
4. Cross market with other Questar Gas programs whenever possible to increase awareness throughout the Utah Questar Gas service territory.
5. Work with retailers, contractors, RMP and other trade allies whenever possible.



## Customer Service

### Call Center

The program administrator will provide a call-center to answer customer and trade ally questions through consultation, education and recommendations. Established customer service guidelines and protocols are in place and answers to commonly asked questions will be determined in order to effectively serve all consumer inquiries. Call center staff will be prepared with extensive information that includes facts on qualified products, specific benefits of efficient products, and current program incentive parameters. The call-center will be staffed during regular business hours (8:00 am – 5:00 pm Mountain Time) to respond to customer inquiries.

Trade allies will also have access to a separate toll-free hotline. Trade allies will be able to reach an implementation team member to request information on incentives, qualified efficient products, contact information for a field representative, and any other program-related questions.

### Website

Information on the Questar Gas DSM website will increase ease of participation and customer service. Information will include:

- Program forms.
- Incentive information and qualifications for easy reference.
- Trade ally materials including training information.
- Contact information.

### Other

This program will assess other customer service needs as they arise. Possible additions to the customer service toolbox could include:

- Bilingual materials.
- Trainings and exchange of informational materials with the Questar Gas call center.

## Trade Ally Management

The trade allies represent the critical link to delivering an effective and successful program in the market. Retailers, salespersons, distributors and contractors become the face and the sales force of the program. The program administrator will develop and maintain a strong trade ally network.

### Recruitment

The program administrator will develop and maintain a strong trade ally network that will be supported through field services. Field services are an integral component of the program providing the key relationship between the program and trade allies. Trade ally recruitment will be accomplished through a variety of resources including:

- Field representatives promoting the program through site visits to trade allies
- Follow up with potential trade allies through phone contact in addition to face to face meetings in order to speed up enrollment

- Target participants of the Rocky Mountain Power program and send introductory letters through direct mail

## Participation

The program administrator will provide trade allies with resources to support their involvement and help ensure consistent messaging. Field representatives will provide training, marketing materials, incentive forms and general program information.

## Training

Trade allies will be trained and equipped with appropriate materials and information to properly communicate the participation parameters to the customer. Training support will include:

- One-on-one training sessions, both in person and over the phone.
- Program training materials including program qualifications and procedures, installation requirements, product facts and contact information.
- Continued training on a frequent basis to refresh information and give specific promotion-focused training and corresponding materials.

## Contractor Participation Requirements

For measures that are typically installed by a contractor (high-efficiency furnaces and tankless water heaters), performance standards must be established to ensure proper installation and deemed savings levels. Although installation contractors are considered trade allies, a more rigorous qualification process will be established that includes participation and installation guidelines for these contractors.

## Quality Control

The measures requiring trained contractor installation will be inspected for a minimum of the first three installations for a new contractor. Random samples and inspections of measures will be performed on at least 10% of the installations throughout the program period. Quality control on the measures that are self installed is completed through the rebate processing procedures described in the tracking and measurement section of this document.

## Projected Savings Measure Total

Measure	Incentive	Unit Gross Annual Savings (Dth)	Participants	Total Gross Annual Savings (Dth)	Total Incentives
ENERGY STAR Clothes Washer - Tier 1 / Tier 2	\$50 / \$75	1.58 / 2.04	9,180	16,194	\$550,800
High Efficiency Gas Dryer	\$30	1.02	226	231	\$6,780
High Efficiency Standard Water Heater	\$50	2.70	4,052	10,940	\$202,600
Tankless Water Heater	\$300	10.20	41	418	\$12,300
High Efficiency Furnace	\$300	14.20	2,000	28,400	\$600,000

## Implementation

The program implementation phase begins upon Public Service Commission approval. Questar Gas anticipates launching the implementation phase, within 10 days of program approval. Approximately 45 – 90 days will be necessary to implement the program including the development of all program materials and the initial market introduction. The timeline below provides estimates for implementation deliverables to be initiated upon program approval. Incentive activity is expected to be minimal during the early implementation of the program due to initial market introduction.

### Timeline

This timeline reflects the estimated number of days tasks will take from program approval.

Task	Deliverable	30 Days	60 Days	90 Days
Marketing	Style guidelines			
	Marketing material production			
Customer Service	Train call center staff			
Trade Ally Management	On-site training of trade allies			
	Deliver marketing materials			
Tracking & Measurement	Program database			
	Incentive processing systems			
	Standardized activity reports			
Reporting	Monthly invoice			
	Monthly savings & activity reports			
Questar Gas Coordination	Kick off meeting			
	Weekly management meetings			
Contractor QC	Contractor qualification			

## Administration

The program administration phase represents the on-going delivery of the program. All internal systems, processes and procedures will be created during the design and implementation phases and will be fine-tuned as the administration phase progresses. Program activity should ramp up as the program progresses.

## Program Measurement & Evaluation

### Program Budget

Residential Rebates Program Budget					
Development	Marketing	Delivery	Incentives	Evaluation	Total
\$131,455	\$40,700	\$276,962	\$1,372,480	\$25,000	\$1,846,597
7.1%	2.2%	15.0%	74.3%	1.4%	100.0%
Residential Rebates Program Customer Savings					
Participants	Annual Net Dth Savings	Net Avoided Gas Cost per Year	Simple Payback		
15,499	45,030	\$358,419	5.15		

## Tracking & Measurement

A database will be developed to capture pertinent and required program information. The database will take into account any existing data collection systems to create further synergies. The database will be designed to handle the processing and payment of customer incentives.

The database will be designed to verify incentive eligibility, provide necessary information for program reporting and collect market information.

### Data Tracking

Information collected in the database will include:

- Customer information including name, site address, and account information.
- Equipment details including product name, model number, and serial number.
- Sales data including price and store purchased.
- Deemed savings.

### Quality control

The database will be structured to allow for quality control in incentive processing including:

- Prevention of duplicate payments by checking for duplicate entry of site addresses, serial numbers, account numbers, etc.
- Project qualification verified through site location and detailed product information (model numbers, etc.)
- Check for completeness by verifying that all required data has been entered and information is within accepted data parameters.

## Cost Effectiveness

MEASURE	Total Resource Cost		Participant Test		Utility Cost Test		Ratepayer Impact Measure Test	
	NPV	B/C <sup>1</sup>	NPV	B/C <sup>1</sup>	NPV	B/C <sup>1</sup>	NPV	B/C <sup>1</sup>
Energy Star Clothes Washer - Tier 1	\$34,056	1.0	\$1,022,265	1.6	\$602,607	1.8	\$265,803	1.2
Energy Star Clothes Washer - Tier 2	\$107,013	1.1	\$1,084,772	1.8	\$410,817	1.5	\$120,962	1.1
High Efficiency Gas Clothes Dryer – Residential	\$7,583	1.3	\$33,352	2.1	\$13,929	1.7	\$5,877	1.2
High Efficiency Gas Water Heater – Residential	\$897,308	2.0	\$1,961,664	2.7	\$1,238,650	3.2	\$796,172	1.8
Tank Less Gas Water Heater – Residential	\$10,363	1.1	\$56,665	1.6	\$67,928	3.0	\$42,963	1.7
90% Plus AFUE Condensing Gas Furnace – Residential	\$3,068,644	2.0	\$6,191,248	2.6	\$4,416,493	3.6	\$2,924,967	1.9
Program Costs	-\$1,137,328	0.0	\$0	0.0	-\$1,137,328	0.0	-\$1,137,328	0.0
Totals	\$2,987,639	1.4	\$10,349,965	2.3	\$6,750,424	2.1	\$3,019,416	1.4

## Program Evaluation

Questar Gas will perform an evaluation over the life of the program. An in-depth, independent evaluation will be conducted once the program has been operating for a period of time in which customer savings can be reasonably and accurately evaluated (year two or three).

A limited evaluation will be conducted following the one year program anniversary. The cost for this limited evaluation is included in the program budget section shown above. The limited evaluation will focus primarily on awareness of the program, adoption rates by customers, program process efficiency and customer satisfaction with the program. Results from evaluations will be used to refine the program and to increase the accuracy of future DSM modeling.

<sup>1</sup> Net Present Value of benefits divided by Net Present Value of Program Costs.