Residential Equipment

1. Program Description

This program promotes the purchase of high-efficiency equipment by residential customers in new and existing homes. The program provides customers with rebates to offset the higher purchase cost of efficient equipment, as well as information on the features and benefits of efficient equipment. Targeted equipment includes heating, cooling, water heating, and appliance measures. The program is delivered in partnership with a network of heating, cooling and water heating dealers as well as retail outlets selling qualifying equipment.

2. Operations

The program primarily relies on equipment dealers to promote and deliver the program. The dealers help customers understand the features and benefits of high-efficiency equipment, select high-efficiency equipment and fill out program applications.

Key steps in program participation include:

- Completing the program application,
- Ensuring that equipment meets program qualifications,
- Processing rebate checks for qualified equipment and
- Verifying equipment installation for a sample of participants.

The program contractor provides a range of support functions to manage the program, including processing applications, tracking program data, answering questions from dealers and customers, verifying equipment installations and coordinating rebate distribution to customers. MidAmerican energy efficiency staff provide overall strategic direction for the program, and – supported by additional contractors – research and development, promotion, trade ally support, evaluation and other administrative functions.

3. Value Proposition

Customers participating in the program receive three main benefits.

- The process is ***simple and straightforward***. Equipment rebates are accessible to any qualifying customer for any qualifying equipment.
- Customers ***save money*** in the short term through rebates and in the long term through lower utility bills.
- Customers ***receive reliable advice*** about high quality, energy-efficient equipment from a trustworthy source.

4. Customer Targets

This program targets residential customers and landlords of residential customers in existing and new housing who purchase equipment that is promoted through the program. The program is available to customers replacing existing equipment or purchasing equipment for the first time. Program measures must save energy supplied directly by MidAmerican.

Landlords installing larger equipment for master-metered multifamily buildings may use the available nonresidential programs for technical and financial assistance.

Table 1 outlines customer eligibility requirements.

Table 1
Customer Eligibility Parameters

	Electric Equipment	Natural Gas Equipment
Customer Class	Residential electric rate	Residential natural gas rate
Customer Status	Customer homeowners; Landlords of customers	Customer homeowners; Landlords of customers
Building Type	Single Family; Multifamily (served by residential rate); Mobile Home	Single Family; Multifamily (served by residential rate); Mobile Home
Building Vintage	Existing and new construction	Existing and new construction
Geography	Installed in MidAmerican South Dakota electric territory	Installed in MidAmerican South Dakota gas territory

5. Trade Ally Targets

Any business that sells or installs qualifying equipment within MidAmerican's service territory may participate in the program. The following types of trade allies are predominant:

- HVAC dealers
- Plumbing and mechanical dealers
- Retail outlets

Trade allies play a key role in implementing the program. To support its trade allies and keep them informed of program opportunities and changes, MidAmerican will maintain an active trade ally program.

6. Eligible Measures

Table 2 provides the categories and measures MidAmerican expects to include in the Residential Equipment program. For each category, MidAmerican will develop minimum eligibility requirements, leveraging ENERGY STAR® guidelines where appropriate. In addition to these measures, MidAmerican will offer a supplementary rebate for installation of heating and cooling equipment that meets industry-accepted standards for quality installation. MidAmerican performs an annual review of qualifying equipment and may adjust measures and eligibility levels in the future as market conditions and equipment standards change.

Table 2
Residential Equipment Measures

HVAC	Water Heat
Central air conditioners Room air conditioners Air-source heat pumps Ground-source heat pumps Add-on heat pumps Programmable thermostats High-efficiency natural gas furnaces High-efficiency natural gas boilers High-efficiency natural gas furnace fans Quality installation (furnace and AC)	High-efficiency natural gas water heaters

7. Market Barriers

Table 3 presents the key market barriers to a successful residential equipment program, as well as strategies the program uses to address each barrier. Note these program strategies can only partially offset the identified barriers.

Table 3
Market Barriers and Strategies

Market Barriers	Program Strategies
Higher first cost of energy-efficient equipment	Offer rebates and discounted financing; Educate customers on the long-term energy cost-saving benefits of higher efficiency equipment
Time required to fill out rebate forms	Provide simple rebate forms through a variety of media (mail-in, online); Allow trade allies to fill in rebate forms for customers at the time of equipment purchase
Customers don't bother to look for qualifying measures	Trade ally training to help customers quickly identify appropriate measures and products; In-store brochures and other program materials such as rebate application forms
Trade allies not up-selling to high-efficiency equipment	Provide trade ally outreach to explain the benefits of selling higher efficiency equipment;
Lack of availability of qualifying equipment	Promote programs to customers so they ask for qualifying equipment and dealers stock it; Trade ally outreach; upstream market support
Customers don't understand the long-term value of high-efficiency equipment	Train trade allies to explain life-cycle costs to customers;
Dealers are unaware of program	Provide outreach to dealers

8. Financial Incentives

The program provides rebates on a per-device basis to program participants installing qualifying equipment. For some equipment the rebate will be a fixed amount per device while, for other equipment, the rebate will increase with increasing equipment efficiency. Other incentives will encourage quality installation practices for specific heating and cooling equipment. Rebates take the form of a check provided to qualifying customers completing the rebate applications.

MidAmerican performs an annual review of rebate levels and performance criteria and may adjust rebates in the future as market conditions change.

9. Promotion

This program will rely primarily on point-of-sale dealer information for promotion. MidAmerican meets with targeted trade allies to promote the program one-on-one and at trade ally conferences and trade fairs, and also distributes brochures that outline the program's features, benefits, eligibility requirements and financial incentives.

10. Participation

Table 4 provides program participation assumptions.

Table 4
Participation Assumptions

	2009	2010	2011
Electric Measures			
Central Air Conditioners	6	23	28
Air Source Heat Pumps	1	3	4
Geothermal Heat Pumps	-	1	2
Quality Installations	-	7	19
Desuperheater Water Heats	-	1	2
Room Air Conditioners	-	1	1
Electric Water Heaters	-	2	2
Natural Gas Measures			
Furnaces	578	877	1,065
Boilers	8	12	15
Quality Installations	-	219	639
Gas Water Heaters	118	179	218

11. Energy and Demand Savings

Table 5 provides energy and demand savings goals.

Table 5
Cumulative Energy and Demand Savings

	2009	2010	2011
Electric Impacts			
Annual Energy (kWh)	1,316	20,681	57,721
Peak Demand (kW)	1	10	28
Natural Gas Impacts			
Annual Energy (therms)	54,790	151,707	293,011
Peak-Day Demand (therms)	765	2,120	4,103

12. Budget

Table 6 provides program budget assumptions.

Table 6
Budget ($000)

	2009	2010	2011
Electric Budget			
Planning & Design	$1,000	$0	$0
Administration	$2,000	$2,000	$2,000
Advertising & Promotion	$0	$0	$0
Customer Incentives	$2,000	$10,000	$17,000
Monitoring & Evaluation	$0	$0	$0
Equipment	$0	$0	$0
Installation	$0	$0	$0
Electric Total	**$5,000**	**$12,000**	**$19,000**
Natural Gas Budget			
Planning & Design	$127,000	$6,000	$6,000
Administration	$41,000	$41,000	$42,000
Advertising & Promotion	$4,000	$5,000	$5,000
Customer Incentives	$177,000	$297,000	$408,000
Monitoring & Evaluation	$4,000	$14,000	$7,000
Equipment	$7,000	$0	$0
Installation	$0	$0	$0
Natural Gas Total	**$360,000**	**$363,000**	**$468,000**
Total Budget			
Planning & Design	$128,000	$6,000	$6,000
Administration	$43,000	$43,000	$44,000
Advertising & Promotion	$4,000	$5,000	$5,000
Customer Incentives	$179,000	$307,000	$425,000
Monitoring & Evaluation	$4,000	$14,000	$7,000
Equipment	$7,000	$0	$0
Installation	$0	$0	$0
Total	**$365,000**	**$375,000**	**$487,000**

13. Cost-Effectiveness Results

Table 7 provides program cost-effectiveness results.

Table 7
Cost-Effectiveness Results

Test	B/C Ratio
Participant	1.44
Utility	2.35
Ratepayer Impact Measure	0.66
Total Resource	0.85
Societal	1.13