

Residential Audit

1. Program Description

This program encourages comprehensive efficiency improvements in existing homes by providing free online and on-site energy audits, on-site installation of simple energy-efficiency measures and financial incentives for insulation improvements. The program is delivered through two separate components to meet the needs of different customer segments and operates under the registered trademark name of HomeCheck®.

HomeCheck® Online. This is a free, simple-to-use online evaluation tool that provides recommendations for efficiency improvements based on data inputs provided by the homeowner. Where appropriate, homeowners following through on recommendations may be eligible for financial incentives from this or other MidAmerican programs.

HomeCheck. This component provides free on-site energy audits, during which auditors directly install simple energy efficiency measures, evaluate eligibility for a predetermined list of more complex measures eligible for program rebates (e.g., building insulation) and provide additional information. On-site energy audit participants also are eligible for financial incentives for qualifying measures through the Residential Equipment Program or other MidAmerican programs.

2. Operations

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.

MidAmerican works with a program contractor to administer the overall program. This contractor delivers HomeCheck audits and provides additional administration and tracking. MidAmerican also relies on additional program contractors to provide online audit software and verification services.

Each component employs a different implementation strategy, as follows:

HomeCheck Online. MidAmerican's free online energy audit is a simple evaluation tool available to all MidAmerican customers on MidAmerican's Web site. The program gives homeowners access to 12 months' utility billing history and allows them to enter several data inputs. Based on this information, the program provides a semi-custom list of recommended energy efficiency improvements. Many of the suggested measures are common efficiency improvements and are accompanied by educational information. Customers using the online tool also can request an on-site energy audit by completing a simple Web form. Online participants installing recommended measures may be eligible for financial incentives through one or more MidAmerican programs. The program is delivered through a program contractor that provides the online audit functionality.

HomeCheck. This component is delivered through a program contractor who provides the on-site audits, maintains an inventory of low-cost measures for installation,

maintains a network of qualified installers of insulation measures, processes rebates, verifies a sample of measure installations and provides program tracking.

Key steps in the on-site energy audit component include:

- Scheduling and completing an on-site energy audit, during which an auditor directly installs simple energy efficiency measures, evaluates eligibility for a predetermined list of more complex measures eligible for program rebates, reviews energy usage and cost patterns found in historic energy bills, informs customers on ways to operate home energy systems more efficiently and disseminates information on other MidAmerican program offerings,
- Providing the homeowner with an energy audit report which highlights recommended energy-saving improvements,
- Coordinating, where appropriate, with network contractors for measure installation,
- Encouraging participants to install eligible insulation measures on their own or through dealers not included in MidAmerican's network,
- Processing rebate payments to customers,
- Verifying measure installation for a sample of participants and
- Explaining other programs for which customers may be eligible.

3. Value Proposition

Customers participating in the program receive the following main benefits:

- *A whole-house assessment* and trustworthy energy-savings recommendations from trained auditors,
- *Immediate savings* through the direct installation of low-cost insulation, water heating and other energy-saving measures,
- *Significant savings*, increased comfort and increased property values through rebates on efficiency projects and
- *Lower hassle* by relying on program processes for scheduling audits, identifying efficiency measures, maintaining quality control and providing follow-through on savings recommendations.

4. Customer Targets

This program is available to all residential customers in existing housing, with eligibility varying by component. HomeCheck Online is available to all customers. MidAmerican provides on-site audits to customers (and their landlords) in buildings over 10 years old who purchase heating fuel directly from MidAmerican.

When multifamily buildings receive at least some service on nonresidential tariffs – either because the building is master-metered or because common areas and building systems are served on nonresidential tariffs - customers receive program services in coordination with the Small Commercial Energy Audit program (BusinessCheck[®]).

Table 1 outlines customer eligibility requirements.

Table 1
Customer Eligibility Parameters

	Online Audit	On-Site Audit	Low-Cost Measures	Insulation Rebate
Customer Class	Residential rates	Residential rates	Residential rates	Residential rates
Customer Status	Homeowners; Landlords	Homeowners; Landlords	Homeowners; Landlords	Homeowners; Landlords
Building Type	Single-family; Multifamily; Mobile home	Single-family; Multifamily; Mobile home	Single-family; Multifamily; Mobile home	Single-family; Multifamily
Building Vintage	All ages	> 10 years old	> 10 years old	> 10 years old
Heating Utility	All fuels	MidAmerican*	MidAmerican*	MidAmerican*
Cooling Utility	All fuels	N/A	N/A	MidAmerican*
Geography	All customers	South Dakota	South Dakota	South Dakota
Other	N/A	N/A	N/A	Pre-qualified during on-site audit

* If possible, MidAmerican will coordinate with other utilities to deliver program to customers served by multiple utilities.

5. Trade Ally Targets

Any business that sells or installs residential energy efficiency equipment within MidAmerican’s service territory may participate in the program. The HomeCheck component also maintains a list of preferred insulation dealers who meet its quality-control requirements. These trade allies will be recommended to MidAmerican customers for installation of suggested energy efficiency measures (although customers may choose to install measures on their own or through non-network dealers). MidAmerican also will work with other trade allies to make them aware of the program and its benefits. The following types of trade allies are predominant:

- Insulation dealers
- Window dealers
- HVAC dealers

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 maintains an active trade ally program.

6. Eligible Measures

The program promotes a wide range of measures through the various program components.

Direct installation measures: Typical measures directly installed in HomeCheck audits include:

- Water heater insulation blankets
- Water heater pipe insulation
- Faucet aerators
- Low-flow showerheads and
- Programmable thermostats (installed with small co-pay from customer)

MidAmerican also will provide financial incentives to customers adding appropriate levels of insulation to ceilings, walls, foundations, crawl spaces, external ducts, and band joists.

7. Market Barriers

Table 2 presents the key market barriers to an effective Residential Audit program, as well as strategies the program uses to address each barrier. Note these program strategies can only partially offset these barriers.

Table 2
Market Barriers and Strategies

Market Barriers	Program Strategies
Lack of customer awareness	Provide customer marketing and outreach; Prepare homeowner case studies with costs and energy savings; Provide efficiency education
Limited time, resources and awareness on how to act on recommendations	Provide robust trade ally network and referral program to help identify appropriate dealers; Provide follow-up letters to encourage customers to move through installation steps; Give information about simple behavioral changes and maintenance tips that provide ongoing savings; Provide efficiency education
Low dealer awareness	Provide outreach and education to dealers
High incremental cost of efficient equipment	Provide no-cost, on-site energy audits and direct installation measures for immediate savings; Provide rebates and financing for more expensive measures
Customers don't trust energy-savings calculations	Provide savings estimates from trusted MidAmerican sources; Provide case studies of actual projects with energy savings where appropriate

8. Financial Incentives

The program offers participants the following types of financial incentives.

- **Free energy audits** are offered for HomeCheck Online and HomeCheck participants.

- **Full subsidies** are offered for most low-cost measures directly installed during the audit. This strategy is intended to fully overcome market barriers concerning cost, perceived quality and time and effort to install.
- **Partial subsidies** are offered for programmable thermostats that can be directly installed during the audit. In this case, the customer pays MidAmerican only a portion of the cost of the measure. This strategy requires a shared customer investment to help ensure that customers will utilize the measures to fully realize efficiency benefits.
- **Rebates** are offered for some qualifying measures, such as insulation. Rebates are currently set at 70 percent of qualified installation costs, with caps for each insulation type.

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

9. Promotion

The promotional strategy for this program involves targeting likely participants, including customers purchasing existing homes more than 10 years old and customers with high heating or air conditioning bills. MidAmerican may promote HomeCheck with targeted brochures, dedicated pages on the Company Web site, utility bill inserts, direct mail, promotional materials in welcome packages sent to all new customers and through general awareness advertising. MidAmerican will train call center associates to recommend the program to customers with high bill and comfort complaints, and, when appropriate, to transfer customers to the program call center operated by the program

contractor. MidAmerican also will build program awareness among trade allies throughout the service area.

10. Participation

Table 3 provides program participation assumptions.

**Table 3
Participation**

	2009	2010	2011
Electric Measures			
Audits (Electric Heat Homes)	1	1	1
Insulation (AC Homes)	5	10	11
Natural Gas Measures			
Audits (Gas Heat Homes)	408	826	836
Insulation (Gas Heat Homes)	152	307	312

11. Energy and Demand Savings

Table 4 provides energy and demand savings goals.

**Table 4
Cumulative Energy and Demand Savings**

	2009	2010	2011
Electric Impacts			
Annual Energy (kWh)	2,323	6,856	11,553
Peak Demand (kW)	1	4	6
Natural Gas Impacts			
Annual Energy (therms)	25,392	76,694	128,857
Peak-Day Demand (therms)	233	703	1,180

12. Budget

Table 5 provides program budget assumptions.

Table 5
Budget (\$000)

	2009	2010	2011
Electric Budget			
Planning & Design	\$1,000	\$0	\$0
Administration	\$1,000	\$1,000	\$1,000
Advertising & Promotion	\$0	\$0	\$0
Customer Incentives	\$1,000	\$1,000	\$1,000
Monitoring & Evaluation	\$0	\$0	\$0
Equipment	\$0	\$0	\$0
Installation	\$0	\$0	\$0
Electric Total	\$3,000	\$2,000	\$2,000
Natural Gas Budget			
Planning & Design	\$88,000	\$5,000	\$5,000
Administration	\$55,000	\$56,000	\$58,000
Advertising & Promotion	\$9,000	\$9,000	\$10,000
Customer Incentives	\$121,000	\$250,000	\$260,000
Monitoring	\$5,000	\$31,000	\$8,000
Equipment	\$5,000	\$0	\$0
Installation	\$0	\$0	\$0
Natural Gas Total	\$283,000	\$351,000	\$341,000
Total Budget			
Planning & Design	\$89,000	\$5,000	\$5,000
Administration	\$56,000	\$57,000	\$59,000
Advertising & Promotion	\$9,000	\$9,000	\$10,000
Customer Incentives	\$122,000	\$251,000	\$261,000
Monitoring	\$5,000	\$31,000	\$8,000
Equipment	\$5,000	\$0	\$0
Installation	\$0	\$0	\$0
Total	\$286,000	\$353,000	\$343,000

13. Cost-Effectiveness Results

Table 6 provides program cost-effectiveness results.

Table 6
Cost-Effectiveness Results

Test	B/C Ratio
Participant	28.22
Utility	1.18
Ratepayer Impact Measure	0.51
Total Resource	1.13
Societal	1.55