

MidAmerican Energy Company
South Dakota Energy Efficiency
2014 Annual Report

This report provides the 2014 results for MidAmerican Energy Company's South Dakota Energy Efficiency programs. The 2014 Annual Report includes the following:

1. 2014 Program Results
2. Significant Activities for 2014
3. Program Summaries

Introduction

MidAmerican Energy Company (MidAmerican) conducts energy efficiency programs in South Dakota pursuant to MidAmerican's Revised Energy Efficiency Plan filing for South Dakota (July 27, 2012) and as approved by the South Dakota Public Utilities Commission (Commission) on November 27, 2012, in Docket No. GE12-005. Currently, MidAmerican offers seven different energy efficiency programs to South Dakota customers, five are combination electric/gas programs and two are electric only programs.

1. 2014 Program Results

In 2014, a total of 399 audits were conducted and 5,647 measures were installed, for an expected annual savings of 215,464 kWh of electricity and 495,260 therms of natural gas. In 2014, MidAmerican paid a total of \$1,926,839 in equipment rebates and customer incentives and incurred costs totaling \$178,863 to deliver energy efficiency programs. The total Benefit/Cost ratio (B/C ratio) for MidAmerican's combined energy efficiency programs (not including the Residential Load Management program) for 2014 is 1.72¹.

Overall gas savings achieved by MidAmerican's South Dakota energy efficiency programs in 2014 were greater than projected in the plan; due in part to 2,251 residential natural gas furnace measures included in the Residential Equipment program.

¹ All B/C ratios calculated in this report are based on societal test results. MidAmerican's societal test results use a 4.81% discount rate for the purposes of calculating the net present value of costs and benefits. The societal test also incorporates a 10% externality factor for electric programs and a 7.5% externality factor for gas programs.

Total expenses for 2014 were \$2,025,791 for gas programs and \$95,985 for electric programs. Based on these expenses and the Commission-approved incentive mechanisms, MidAmerican is requesting approval for a 2014 incentive of \$124,207 for natural gas and \$8,041 for electric programs. Significant results for 2014 are as follows:

- Residential electric program savings totaled 142,444 kWh, which was 29 percent lower than 2013, and was 46 percent lower than the 2014 kWh savings goal.
- Residential gas program savings totaled 408,949 therms, which was 31 percent higher than 2013, and was 48 percent higher than the 2014 therm savings goal.
- Total residential spending was three percent above budget for 2014.
- Nonresidential electric program savings totaled 73,020 kWh, which was 85 percent lower than 2013, and was 76 percent below the 2014 kWh savings goal.
- Nonresidential gas program savings totaled 86,311 therms, which was 31 percent above 2013, and was 33 percent below the 2014 therm savings goal.
- Total nonresidential spending was 26 percent below budget for 2014.

Detailed 2014 program results are provided in the following exhibits:

- Exhibit A – Detailed program results by measure
- Exhibit B – Comparisons of program level savings and expenses to budget
- Exhibit C – Benefit/Cost information by program
- Exhibit D – Annual summaries of energy savings and benefits by program

2. Significant Activities for 2014

In 2014, MidAmerican expanded its use of corporate assets and channels to enhance its efforts in promoting energy efficiency programs and tips to its employees and South Dakota customers. Some of the additional assets and channels being used included social media (Facebook and Twitter), web banners on the MidAmerican Energy website, e-newsletters distributed to MidAmerican employees, residential and nonresidential customers, geo-targeting campaigns, and YouTube videos.

MidAmerican conducted the following activities to promote energy efficiency in South Dakota:

- Energy efficiency programs were promoted through special articles in the *At Your Service* newsletter, which is included with customer bills. In addition to the printed version that is included in customers' bill, MidAmerican also generates a mid-month electronic newsletter which is distributed to its residential customers for whom email addresses are available.
- MidAmerican continued to promote all programs through trade allies. In late 2013, a new program contractor was brought on board to expand MidAmerican's outreach and education efforts with Trade Allies. These efforts allow Trade Allies to have direct access to two Trade Ally Ambassadors who are designated program experts available to provide one-on-one program guidance so that Trade Allies can accurately educate customers on the value and benefits of purchasing higher-efficiency equipment and provide MidAmerican's participation guidelines and rebates to interested South Dakota customers.
 - On November 19, 2014, MidAmerican conducted a trade ally meeting in Sioux City, Iowa. During this meeting, MidAmerican reviewed South Dakota program offerings with approximately 25 trade allies that also do business in South Dakota. Trade ally meetings are intended to educate MidAmerican's trade ally partners about MidAmerican's energy efficiency programs and provide trade allies with the tools needed to successfully market MidAmerican's energy efficiency programs to their customers.

- Additional promotional activities included:
 - Utilizing MidAmerican’s call center during the heating season to inform customers about in-home audit options during in-bound calls.
 - Having HomeCheck advisors cross promote programs with eligible customers during the home energy assessment.

3. Program Summaries

a. Residential Equipment

The Residential Equipment 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 and cooling equipment. This program is delivered in partnership with a network of heating and cooling dealers as well as retail outlets selling qualifying equipment.

The Residential Equipment program achieved annual energy savings of 131,482 kWh, which was 44 percent lower than expected and 28 percent lower than 2013; and 380,809 therms, which was 61 percent higher than expected and 36 percent higher than 2013. Total program spending was \$1,580,058 which was eight percent higher than expected.

The combined B/C ratio including both gas and electric components for the Residential Equipment program for 2014 is calculated as 1.67. The B/C ratio for the gas component is calculated as 1.69 and the B/C ratio for the electric component is calculated as 1.33.

Participation in the program related to natural gas furnaces was very strong during the year causing higher than expected natural gas savings and spending. In April, the South Dakota Public Utilities Commission approved MidAmerican Energy’s 2014 Plan updates which included \$780,000 for furnaces and \$32,000 for ground source heat pump incentives. This funding for furnaces was depleted in early October and MidAmerican Energy requested and received approval from the South Dakota Public Utilities

Commission for an additional \$550,142. In November, MidAmerican notified trade allies and customers that additional funding for natural gas furnace incentives was received and that incentives would be paid on a first-come first-served basis until funding was depleted. The additional funding was depleted prior to December 31, 2014. Incentives were provided to all applications received on or before December 31, 2014. In January 2015, MidAmerican notified customers and trade allies that MidAmerican would request approval to use 2015 funding to pay the 2014 rebates for applications received after December 31, 2014. This request is included in MidAmerican Energy's 2015 Energy Efficiency Plan Update filing. Significant highlights for the Residential Equipment program for 2014 include:

- 2,251 new furnaces were rebated in 2014, which was 73 percent higher than projected and 46 percent higher than 2013. Furnace equipment rebates provided 90 percent of the achieved total therm savings for the Residential Equipment program.
- Six ground-source heat pumps and 12 air-source heat pumps were rebated in 2014, which was 36 percent lower than the projected number of total heat pumps and 25 percent lower than 2013. Heat pump equipment rebates provided 74 percent of the achieved total kWh savings for the Residential Equipment program. The lower participation for this equipment is the primary reason the program did not meet its electric savings goal.
- 20 furnace fans were rebated in 2014, which was 43 percent lower than projected and 42 percent higher than 2013.
- MidAmerican promoted the Residential Equipment program by featuring the program in:
 - Special articles in the February and May editions of the *At Your Service* newsletter.
 - The E-Newsletter, an email communication to customers in February.
 - Web banners on MidAmerican's website.
 - Social media in Facebook and Twitter in September.

To increase participation in this program in 2015, MidAmerican will conduct additional program education and outreach by working closely with trade allies to ensure they are aware of the program offerings and availability.

b. Residential Audit

The Residential Audit program encourages comprehensive efficiency improvements in existing homes by providing free on-line and in-home energy audits, in-home installation of simple energy-efficiency measures including faucet aerators, low-flow showerheads, etc. and financial incentives for a predetermined list of complex measures (primarily building insulation). Both the on-line and in-home energy audits are operated under the registered trademark name of HomeCheck.

The Residential Audit program achieved annual energy savings of 5,738 kWh, which was 68 percent higher than expected and one percent higher than 2013; and 28,140 therms, which was 28 percent lower than expected and 16 percent lower than 2013. Total program spending was \$235,822, which was 22 percent lower than expected and three percent lower than 2013.

The combined B/C ratio including gas and electric components for the Residential Audit program for 2014 is calculated as 1.17. The B/C ratio for the gas component is calculated as 1.17 and the B/C ratio for the electric component is calculated as 1.04.

Significant highlights for the Residential Audit program for 2014 include:

- 372 in-home audits were completed in 2014, which was 22 percent lower than projected and 16 percent higher than 2013. MidAmerican will continue to advertise the program as outlined below. By increasing the on-site audit participation, the participation for installed measures and follow-up insulation should improve.
- 165 insulation measures were installed, which was 39 percent lower than projected and 11 percent lower than 2013. Insulation measures installed in 2014 provided 65 percent of the achieved total kWh savings and 64 percent of the achieved therm savings for the Residential Audit program.

- 1,195 direct install measures were installed, which was 28 percent lower than projected and three percent lower than 2013. Direct install measures installed in 2014 provided 35 percent of the achieved total kWh savings and 36 percent of the achieved therm savings for the Residential Audit program.
- MidAmerican promoted the Residential Audit program by featuring the program in:
 - Utilizing MidAmerican’s call center during the heating season to inform customers about in-home audit options during in-bound calls.
 - Special articles in the February and May editions of the *At Your Service* newsletter.
 - Bill inserts in January and July.
 - Web banners and seasonal tips on MidAmerican’s website.
 - The E-Newsletter, an email communication to customers in January and August.
 - Powersource, an internal communications newsletter.
 - Door hangers advertising the program to the neighbors of HomeCheck participants.
 - Social media, Facebook in May and August.

To increase participation in this program in 2015, MidAmerican will conduct additional program education and outreach to residential customers such as working with Xcel Energy to jointly promote the program at local events in the utilities’ shared service territory.

c. Residential Load Management

The Residential Load Management program provides financial incentives to residential customers in exchange for allowing MidAmerican to control central air-conditioning compressors on hot summer days when MidAmerican is experiencing a

system peak demand or when operational conditions require use of the program. The program is promoted under the service mark SummerSaverSM.

During 2014, the Residential Load Management program achieved annual peak demand savings of 78 kW, down from 101 kW in 2013. The 78 kW savings in 2014 was 38 percent lower than projected. During 2014, the program achieved 158 kWh savings which was 19 percent of the goal. The demand and energy savings were less than expected because there was only one cycling day during the 2014 summer season and the temperatures on that day, which was a system test cycling day, were somewhat cooler than typical for a day of program operation. Total program spending was \$16,073, which was eight percent higher than projected. The B/C ratio for the Residential Load Management program for 2014 is calculated as 2.73.

Significant highlights for the Residential Load Management program for 2014 include:

- MidAmerican had 172 load control receivers (LCRs) operating in the field during 2014, which was 15 percent higher than projected and two percent higher than 2013. During 2014, 29 new LCRs were added and two were removed for a net gain of 27 LCRs.
- MidAmerican promoted the program by:
 - Direct mail to eligible customers.
 - Having HomeCheck auditors discuss the program with eligible customers during the home energy audit and leave behind a SummerSaver program application brochure.
- MidAmerican successfully cycled air conditioners on August 25.

d. Appliance Recycling

The purpose of this program is to encourage customers to stop using old, inefficient refrigerators, freezers and room air conditioners and assists in the disposal of old units in an environmentally responsible manner. The program provides rebates to

residential program participants and provides free pick-up and disposal of old working appliances. MidAmerican began offering the Appliance Recycling program in 2013.

The Appliance Recycling program achieved annual energy savings of 5,066 kWh, which was 80 percent lower than expected. Total program spending was \$1,091, which was 82 percent lower than expected.

The B/C ratio for the Appliance Recycling program for 2014 is calculated as 2.20.

Significant highlights for the Appliance Recycling program for 2014 include:

- Customer awareness of the program is increasing due to the inclusion of Appliance Recycling program in the overall energy efficiency promotional efforts in South Dakota.
- MidAmerican promoted the program by:
 - Customer bill insert in June for South Dakota electric customers.
 - Program specific radio, television and print advertising conducted in Sioux City, Iowa, media channels.

To increase participation in this program in 2015, MidAmerican will conduct additional program education and outreach to residential electric customers and trade allies with:

- Specific trade ally outreach efforts to new appliance dealers using our Trade Ally Ambassadors.
- Specific customer outreach through community and business organizations
- Partnering with City/School sponsored events such as clean-up days, Earth Day, etc.

e. Nonresidential Equipment

The Nonresidential Equipment program promotes the purchase of high-efficiency equipment by commercial and industrial customers in new and existing facilities. The program provides customers with rebates to offset the higher purchase cost of efficient equipment and is organized into three sections for program delivery:

- Heating, ventilation and air conditioning
- Lighting
- Variable speed drives

The program is delivered in partnership with a network of trade allies specifying, selling, and installing qualified equipment. The program targets replacement and first-time purchases, but also is available to customers making retrofit installations.

The Nonresidential Equipment program achieved annual energy savings of 73,020 kWh, which was 70 percent lower than expected, and 75,998 therms, which was 28 percent lower than expected. Total program spending was \$237,766, which was 20 percent lower than expected. Participation in this program was impacted due the exceptionally cool summer months, which affected the number of air conditioning measures coming through the program. In addition, there were no variable speed drive (VSD) projects submitted in 2014. VSDs installed on a fans, pumps and blowers were projected to provide significant energy savings to the program.

The combined B/C ratio including gas and electric components for the Nonresidential Equipment program for 2014 is calculated as 2.38. The B/C ratio for the gas component is calculated as 2.31 and the B/C ratio for the electric component is calculated as 3.49.

Significant highlights for the Nonresidential Equipment program for 2014 include:

- 144 new furnaces were installed, which was 20 percent lower than projected and 37 percent higher than 2013.
- 43 programmable thermostats were installed, which was 48 percent higher than projected and 87 percent higher than 2013.
- 196 lighting measures were installed, which was eight percent higher than projected and 302 percent lower than 2013. Lighting measures accounted for 97.2 percent of the achieved kWh electric savings for the Nonresidential Equipment program in 2014.

Since this program is primarily delivered in partnership with a network of trade allies, MidAmerican will expand its program education and outreach effort with trade allies to include targeted emphasis with VSD specifiers and distributors along with electrical contractors and distributors promoting efficient lighting upgrades to help increase participation in this program in 2015.

f. Nonresidential Custom

The Nonresidential Custom program provides a program delivery channel for non-standard energy-saving measures. It offers financial incentives to customers installing equipment or systems not covered by a prescriptive rebate in the Nonresidential Equipment program. The program is marketed as the Custom Systems program.

The Nonresidential Custom program achieved annual energy savings of 6,752 therms, which was 51 percent lower than target. Total program spending was \$20,982, which was 56 percent lower than budget. There were no Nonresidential Custom electric projects in 2014.

The combined B/C ratio including gas and electric components for the Nonresidential Custom program for 2014 is calculated as 2.35. The B/C ratio for the gas component is calculated as 2.43 and the B/C ratio for the electric component is calculated as zero.

Significant highlights for the Nonresidential Custom program for 2014 include:

- Three boiler stack draft controls were installed in 2014 which is 57 percent lower than the seven units installed in 2013. These three units accounted for all of the gas savings goal.

g. Small Commercial Audit

The Small Commercial Audit program promotes comprehensive energy efficiency strategies for smaller commercial customers. It provides extensive on-site energy audits, direct installation of low-cost efficiency measures including faucet aerators and LED exit sign kits, and recommendations for additional measures. The program was supported by a

program contractor and marketed under the registered trademark name of BusinessCheck[®] for the first half of 2014. A new program contractor was brought on midway through 2014 and transitioned customers to the Commercial Energy Solutions program. The program offerings are similar to those offered in the past.

The Small Commercial Audit program did not achieve any electric annual energy savings. The program achieved gas savings of 3,561 therms, which was 65 percent lower than expected. Total program spending was \$29,983 which was 34 percent lower than budget.

The combined B/C ratio including gas and electric components for the Small Commercial Audit program for 2014 is calculated as 1.17. The B/C ratio for the gas component is calculated as 1.21 and since there were no electric savings in 2014 there is no B/C ratio for the electric component.

Significant highlights for the Small Commercial Audit program for 2014 include:

- 27 energy audits were completed in 2014, which was 53 percent lower than projected and 11 percent lower than 2013.
- Nine direct install measures were installed, which is 99 percent lower than projected and 85 percent lower than 2013. These direct install measures saved an estimated 224 therms.
- Seven gas projects were installed in 2014, which is 100 percent higher than projected and 17 percent higher than 2013. The seven projects lead to an estimated savings of 3,337 therms.

MidAmerican promoted the program in 2014 by:

- Program specific advertisement included in the Sioux City Business Journal in July, August, September, October and November.
- Program specific content included in MidAmerican's Business Advantage and Key Account eNewsletters every other month during the year.
- Web banners on MidAmerican's website.
- Social media, Facebook during the fourth quarter of 2014.

MidAmerican intends to increase participation in 2015 by increasing its outreach, education and marketing efforts in South Dakota related to this program. MidAmerican will continue to utilize outreach efforts that were effective in the past as well as look into new avenues to reach our customers. The program has successfully utilized a geotargeted campaign effort in Iowa, and is looking to duplicate that success in the Sioux City region which would include customers in South Dakota as well.