MidAmerican Energy Company
Iowa Energy Efficiency Plan 2014-2018
Commercial New Construction Program

Description of Program

The Commercial New Construction program promotes the design and construction of high-efficiency commercial buildings, including new building construction as well as major renovations of existing buildings. The program is delivered in partnership with developers, architects, engineering firms and equipment contractors and provides a mix of technical and financial assistance to help influence projects during the planning stage. Energy design assistance and construction incentives are offered to reduce market barriers to incorporating energy efficiency in construction projects.

Transportation gas customers with daily metering are ineligible for gas incentives. However, customers with monthly metering under the Monthly Metered Transportation Service gas tariff are eligible for energy efficiency incentives.

The program will offer services through five program tracks, tailored to the varying needs of different market segments. The five tracks include:

- **Track I** – targets smaller projects that can be served effectively through an online energy modeling and decision-making tool, conference call assistance, and limited face-to-face meetings. Several building types up to 15,000 square feet are eligible.
- **Track II** – targets projects larger than 15,000 square feet interested in pursuing more standard energy efficiency strategies. This track readily can accommodate fast-track projects, often smaller in size or with less complicated designs.
- **Track III** – targets projects larger than 15,000 square feet interested in pursuing customized energy efficiency strategies. This track provides energy modeling of custom efficiency strategies selected by the owner/design team.
- **Track IV** – targets projects that are interested in pursuing advanced energy efficiency strategies. This track supports strategies required for certification by national market transformation programs such as Leadership in Energy and Environmental Design (LEED) – Optimize Energy Performance or federal tax deductions.
- **Track V** – targets projects that have already participated in the Commercial New Construction program and are interested in additional assistance to achieve ongoing performance and increased energy savings. In this track the energy use of the building is modeled with the actual occupants, equipment and schedules. Additional strategies are proposed to help reduce the overall energy use of the building given the current operational needs.

Tracks I through IV are also available as a volume build process for retail/chain buildings that follow an organization's standard building footprint, regardless of building size. Owners having multiple buildings with identical designs may participate through this streamlined volume build process.

Data Centers – It is important to note that newly constructed data centers are served through the Commercial New Construction program and will be placed in the appropriate track. Due to the energy intensity of these building types, they are prime targets for energy efficient design measures. Energy saving design opportunities will be identified for the customer's unique data center environment.

Measure List

All measures or strategies that improve energy efficiency relative to the State of Iowa Energy Code are potentially eligible for the Commercial New Construction program. Typical measures include:

- Glazing systems and window layouts
- Daylighting controls
- Envelope systems
- Lighting controls and lighting designs
- Heating and cooling systems
- Load-responsive fan and pump motor controls
- Outside air control systems
- Other strategies unique to the project, such as data centers

MidAmerican performs an annual review of qualifying measures and may adjust measures and eligibility requirements as market conditions and equipment standards change.

Information on savings, incentives, incremental costs, and other qualifying information for all measures in this program is provided in Appendix A.

Budgets

Anticipated five-year spending for the Commercial New Construction program is as follows:

Electric Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 1,241,763	$ 5,446,313	$ 6,688,076
2015	$ 1,272,807	$ 5,463,839	$ 6,736,646
2016	$ 1,304,627	$ 5,474,431	$ 6,779,058
2017	$ 1,337,243	$ 5,484,755	$ 6,821,998
2018	$ 1,370,674	$ 5,463,283	$ 6,833,957
Total	$ 6,527,114	$ 27,332,619	$ 33,859,733

Gas Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 611,566	$ 1,284,007	$ 1,895,573
2015	$ 626,855	$ 1,266,481	$ 1,893,336
2016	$ 642,526	$ 1,255,889	$ 1,898,415
2017	$ 658,589	$ 1,245,565	$ 1,904,154
2018	$ 675,054	$ 1,267,037	$ 1,942,091
Total	$ 3,214,590	$ 6,318,979	$ 9,533,569

Total Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 1,853,329	$ 6,730,320	$ 8,583,649
2015	$ 1,899,662	$ 6,730,320	$ 8,629,982
2016	$ 1,947,153	$ 6,730,320	$ 8,677,473
2017	$ 1,995,832	$ 6,730,320	$ 8,726,152
2018	$ 2,045,728	$ 6,730,320	$ 8,776,048
Total	$ 9,741,704	$ 33,651,598	$ 43,393,302

Detailed budgets by spending category and staffing assumptions in FTEs for this program are provided in Appendix B.

Energy Savings

Anticipated savings levels for the Commercial New Construction program are as follows:

Electric Savings	Annual kWh	Peak kW
2014	31,287,211	3,967
2015	31,287,211	3,967
2016	31,287,211	3,967
2017	31,287,211	3,967
2018	31,287,211	3,967
Total	156,436,056	19,833

Gas Savings	Annual Therms	Peak Therms
2014	400,994	1,192
2015	400,994	1,192
2016	400,994	1,192
2017	400,994	1,192
2018	400,994	1,192
Total	2,004,968	5,961

Participation

Participation estimates for each measure offered in this program are provided in Appendix C.

Cost Effectiveness

Anticipated total net economic benefits of the program are as follows:

Program	Electric	Gas	Total
Program Benefits	$ 128,155,122	$ 20,132,258	$ 148,287,379
Program Costs	$ 58,930,541	$ 12,787,785	$ 71,718,326
Net Economic Benefits	$ 69,224,580	$ 7,344,473	$ 76,569,054
Societal Test Ratio	2.17	1.57	2.07

Operations

Description of Operations

The program uses a similar process for each of the first four energy design assistance tracks, although services are tailored to project timing, technical expertise and other needs of each market segment.

Key steps in program operation include:

- **Application** – The design team or owner submits an application form to prequalify the project.
- **Screening** – MidAmerican screens the project to verify that it meets program guidelines.
- **Strategy discussion** – Upon acceptance, MidAmerican's energy design consultant facilitates energy design assistance meetings with the design team to develop optional energy conservation strategies for analysis.
- **Consultation** – The program contractor facilitates discussions and energy modeling of various energy-saving strategies. A final energy design report is provided to the owner and design team describing implementation, energy savings and simple paybacks for the strategies. MidAmerican pays a design team participation incentive to help offset the design team members' expenses associated with program participation.
- **Selection** – The building owner and design team choose strategies that will be incorporated into construction. After energy-saving strategies are chosen, the construction phase begins.
- **Design requirements provided** – MidAmerican Energy provides a list of design requirements necessary to achieve the energy efficiency goal and the full incentive.
- **Construction document review** – For select projects, generally larger than 50,000 square feet, the program contractor will review the final construction documents to locate the energy design strategies the owner selected. A construction document review will identify the percentage of achievement to the energy efficiency goal. A Construction Document Review report is provided to the owner to allow for adjustments to the construction documents for energy strategies that were inadvertently omitted.
- **Final verification** – After construction is completed and the building is occupied, MidAmerican Energy's consultant will review final documents to create a final verification report and may conduct a site visit.
- **Rebate processing and database maintenance** – The program contractor and MidAmerican staff process rebates and maintain the database for tracking and reporting purposes.

Track V, the Ongoing Performance Track, is available to participants following any of the other four energy design assistance tracks and involves the following key benchmarking and selection steps:

- **Ongoing Performance Track customer selection** – Customers who have completed the Commercial New Construction program and have been in operation for at least one year will be selected for benchmarking.
- **Benchmarking** – Actual metered energy use for selected customers will be compared to the energy use projections of the Commercial New Construction energy model created during the design phase prior to construction and occupancy.

- **Targeting of customer projects** – Buildings that are using significantly more energy than original energy model projections will be targeted for participation.
- **Identification of additional projects** – Customers who are interested in ongoing performance and have potential for further savings in their building operations will be accepted into this program track.

Key steps in Ongoing Performance Track operation include:

- **Program enrollment** – The customer enrolls in program.
- **Adjustment of energy model** – The original energy model is adjusted for as-operated conditions, including building occupancy, building use, weather and other operational changes.
- **Establishment of performance targets** – Performance targets are set based on percentage improvements beyond those predicted by the original energy model.
- **Identification of measures** – The program contractor will work with building owners and operators to identify measures to further reduce energy use.
- **Calculation of incentives** – Incentives are calculated and offered.
- **Provision of data** – Building owners/operators, via a Web interface, will be provided with monthly data on actual building energy use with comparisons to performance targets (adjusted as needed) in a format consistent with existing benchmarking and measurement tools (e.g., EPA's Portfolio Manager software), which will allow participants to pursue additional national recognition and building certifications (e.g., the ENERGY STAR label), if desired.
- **Implementation of strategies** – The building owner/operator implements strategies and monitors energy use compared to energy model expectations via an online tool.
- **Incentive payments** – Incentive payments will be provided directly to building owners.
- **Continuous performance tracking** – The program contractor and the building owner will continue to track performance online for up to two years after completion.

Description of Outside Services

MidAmerican staff provides overall strategic direction for the program, conducts research and development, and provides promotion, trade ally support, evaluation, and other administrative functions.

The program is delivered through the assistance of a program contractor(s) that provides energy design assistance, project management and verification services. The contractor(s) also helps MidAmerican strengthen relations with key trade allies. A fulfillment contractor assists with data tracking and rebate processing.

MidAmerican currently contracts with The Weidt Group, Inc. and A-TEC Energy Corporation for administrative and evaluation services. MidAmerican regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process.

Value Proposition

Customers participating in the program receive three main benefits.

Financial benefits including:

- Free energy design assistance and modeling.
- Comprehensive construction incentives that reduce the payback period of selected energy efficiency measures.
- Increased property values due to lower monthly operating costs, investment in advanced efficiency technologies and improved building operation and comfort.
- Ongoing performance incentives (for participants pursuing that track).

Decision support including:

- High-quality information on the costs and benefits of energy efficiency strategies customized to the building.
- Detailed design specifications for selected measures.
- Online view of building energy performance to energy model projections (for participants pursuing the Ongoing Performance Track).

Confidence in final design decisions due to:

- Owner/developer involvement in the measure selection and review process.
- Independent verification that selected measures are included in design specifications construction documents, and final installation.

Market Barriers

The table below presents the key market barriers to an effective commercial new construction program and strategies the program uses to address each barrier. Note these program strategies can only partially offset the barriers.

Market Barriers and Strategies

Market Barriers to Energy-Efficient Buildings	Program Strategies
Higher cost of building due to energy efficient strategies	Offer incentives to help offset costs at the design phase as well as at the construction phase Provide education during the process to help customers understand the benefits to these strategies
Limited time to engage in long design process	Offer incentives to design team as compensation for time Use a streamlined, efficient and responsive program process Help design team bring added value to their customers
Lack of customer awareness of alternative design strategies	Provide free design assistance Encourage high-level decision-maker involvement throughout the design process Support program with education appropriate to different types of program participants (e.g., designers, owners, etc.)
Customers value design features over efficiency; reluctant to spend resources on energy features	Raise customer awareness through energy design assistance process Focus on long-term benefits of energy efficiency features Provide rebates to lower incremental cost of efficiency features Provide energy model results for the new technology to encourage implementation in this building or their next project

Market Barriers to Energy-Efficient Buildings	Program Strategies
Low customer awareness of program	Ongoing trade ally communications and outreach Marketing and outreach to targeted customers
Low trade ally awareness	Ongoing trade ally support and education Ensure trade allies are aware that training sessions for this program are eligible for LEED Continuing Education Credit
Late project involvement in program	Develop relationships with architects to ensure contact as early as possible in the design stage Educate designers and developers about program requirements and commitments Provide information regarding prescriptive and custom incentives offered through the Nonresidential Equipment program

Incentives

MidAmerican offers the following financial incentives to participants:

- **No-Cost Energy Design Assistance** – MidAmerican's program contractor works with customers, architects and developers during the planning and design stage and studies and tests energy efficiency strategies to be incorporated into construction plans.
- **Design Team Incentives** – Architects and engineers must dedicate considerable resources to the energy design process. To prevent the extra cost from being allocated to the customer, design team participants receive incentive payments to help offset expenses associated with program participation. At the time of filing, the program offers:
    - Track I – $3,500
    - Track II – $3,500
    - Track III – $5,500
    - Track IV – $7,500-$8,500
    - Track V – N/A
- **Construction Incentives** – Construction incentives are paid to the building owner when a target level of energy savings above Iowa Energy Code is achieved. Construction incentives are designed to help offset the additional cost of optimizing energy efficiency strategies in the construction of commercial buildings. At the time of filing, the program offers incentives for projects resulting in at least 15 percent energy savings above code, based on ASHRAE-90.1-2007 and a simple payback of one year. Incentives increase with savings, from $0.06/kWh and $0.60/therm to $0.19/kWh and $1.90/therm for savings ranging from 15 percent to 60+ percent above baseline. Incentives may be revised during the plan for compatibility with Iowa's expected energy code changes.

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

Detailed incentive levels for each measure offered in this program are provided in Appendix A.

Marketing Plan

General Marketing Plan

MidAmerican will target new construction projects using traditional and non-traditional marketing channels, provide education and outreach to customers, trade allies and building community organizations, to encourage customer participation and implementation of energy efficient measures and equipment. MidAmerican's program contractor also will facilitate joint utility marketing efforts for the program through a combination of education and direct outreach, targeting both the demand and supply sides of the commercial new construction market.

MidAmerican will regularly review and update customer-facing program information and marketing materials as part of its internal program evaluation process, and adjust materials as needed based on program adjustments and market characteristics.

Customer Targets

The program targets owners, builders and developers engaged in new construction or major renovations of buildings in the commercial sector, including qualifying multifamily housing facilities.

This program is not designed to assist industrial customers constructing new manufacturing facilities and processes. These customers are eligible for services for new manufacturing facilities under the Nonresidential Equipment and Energy Analysis programs. However, industrial customers building new non-process buildings (e.g., office space, non-process warehouses, etc.) are eligible for this program.

The table below outlines customer eligibility requirements.

Customer Eligibility Parameters

	Electric Equipment	Natural Gas Equipment
Customer Class	Nonresidential electric rates	Nonresidential natural gas rates Gas transportation customers with daily metering are ineligible
Customer Status	Building owners and developers	Building owners and developers
Building Type	Commercial buildings (i.e., non-manufacturing)	Commercial buildings (i.e., non-manufacturing)
Building Vintage	Tracks I-IV New construction Major renovation Track V At least one year old, previous participation in the program	Tracks I-IV New construction Major renovation Track V At least one year old, previous participation in the program
Geography	MidAmerican Iowa service territory*	MidAmerican Iowa service territory*
Building Size	Minimum of 5,000 sq. ft.	Minimum of 5,000 sq. ft.

*When possible, MidAmerican will coordinate with other participating utilities in a joint effort.

Trade Ally Targets

The program relies primarily on the following trade allies for program delivery:

- Architect and engineering firms
- Developers
- Construction firms/building contractors
- Design-build contractors
- Mechanical, electrical and equipment contractors

Trade allies play a key role in supporting the program. To support its trade allies and keep them informed of program opportunities and changes, MidAmerican maintains an active trade ally program. Further information regarding trade allies can be found in the Education program.

Promotion

MidAmerican will engage in a multifaceted promotional strategy that will include:

- Direct outreach to commercial building owners, architectural and engineering firms, builders, developers and trade allies.
- Promotional and educational activities, such as workshops and presentations for customers as well as other stakeholders in the nonresidential building community.
- Attendance and program promotion at architectural and building conferences and trade shows.
- Recognition and awards to trade allies and customers for successful projects.
- Advertisements and case studies in appropriate professional and trade journals and publications.
- Periodic articles in MidAmerican's monthly electronic newsletter as well as its quarterly newsletter provided with customer bills.
- A dedicated Web page that includes program information and qualification requirements and a program brochure.
- A reference to the energy efficiency website will appear periodically on customer bills and in the electronic newsletter.
- Earned media from press releases regarding successful, high-profile projects.

Program referrals also are expected from trade allies. Information will be available on a dedicated portion of the energy efficiency website to assist trade allies in marketing and delivering energy-efficient products and services to customers, while encouraging participation in energy efficiency programs. The website offers trade allies the opportunity to order program materials, learn about program changes, and provide contact information for future communications. To keep trade allies informed and engaged with the program, MidAmerican will periodically provide program information and training via a variety of different communication modes to create overarching energy efficiency and program awareness among our customers and trade allies. MidAmerican's Trade Ally Central website provides additional resources for trade ally engagement.

MidAmerican Energy Company
Iowa Energy Efficiency Plan 2014-2018
Nonresidential Load Management Program

Description of Program

The Nonresidential Load Management program provides large nonresidential customers with financial incentives to reduce demand during MidAmerican's system peak hours. Customers must commit to providing a specified amount of load reduction when called for by MidAmerican during the curtailment season (June 1 to September 30). Customers use one of three strategies to reduce demand during curtailment events: they shed load, shift load to non-peak periods or generate replacement power with on-site generators. MidAmerican staff and customers use a near-real time monitoring software system to monitor load levels in near-real time during curtailment events. Customers also receive ongoing support from their key account managers to assist them with program compliance and support. The program is marketed to customers as the Nonresidential Load Management program.

Measure List

The Nonresidential Load Management program provides rebates and incentives for peak demand reduction using one or more of the following methods:

- On-site generator(s)
- Shed load
- Shift load to non-peak hours

Information on savings, incentives, incremental costs, and other qualifying information for all measures in this program is provided in Appendix A.

Budgets

Anticipated five-year spending for the Nonresidential Load Management program is as follows:

Electric Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 561,060	$ 7,981,249	$ 8,542,309
2015	$ 575,087	$ 7,981,249	$ 8,556,336
2016	$ 589,464	$ 7,981,249	$ 8,570,713
2017	$ 604,201	$ 7,981,249	$ 8,585,450
2018	$ 619,306	$ 7,981,249	$ 8,600,555
Total	$ 2,949,118	$ 39,906,245	$ 42,855,363

There are no gas costs associated with this program.

Detailed budgets by spending category and staffing assumptions in FTEs for this program are provided in Appendix B.

Energy Savings

Anticipated savings levels for the Nonresidential Load Management program are as follows:

Electric Savings	Annual kWh	Peak kW
2014	5,154,450	245,947
2015	5,154,450	245,947
2016	5,154,450	245,947
2017	5,154,450	245,947
2018	5,154,450	245,947

There are no gas savings associated with this program.

Participation

Participation estimates for each measure offered in this program are provided in Appendix C.

Cost Effectiveness

Anticipated total net economic benefits of the program are as follows:

Program	Electric	Gas	Total
Program Benefits	$ 211,726,888	$ -	$ 211,726,888
Program Costs	$ 2,810,787	$ -	$ 2,810,787
Net Economic Benefits	$ 208,916,102	$ -	$ 208,916,102
Societal Test Ratio	75.33	-	75.33

Operations

Description of Operations

The program is delivered through MidAmerican's regulatory strategic analysis, key account management and electric trading staff.

Key steps in program participation include:

- **Program contract** – Customer signs a one-year or three-year program contract, which describes the rights and responsibilities of customers and MidAmerican in program operations as defined by the curtailment tariff rider.
- **System installation** – Necessary hardware and software systems, which require, at a minimum, electric meters that can record interval data, as well as communication lines (telephone or Internet TCP/IP) to transmit the interval data to MidAmerican for monitoring and evaluation are installed.
- **Test event** – Program operations are tested during an optional mock curtailment event that MidAmerican conducts each year prior to the curtailment season.
- **Event notice** – Notice of curtailment events is provided to customers at least two hours in advance of events, but commonly up to 24 hours in advance.

- **Event operation** – Curtailment events are triggered by guidelines detailed in the tariff rider and communicated to customers through personal communications from key account managers and via monitoring software.
- **Performance evaluation** – Customer and program performance is evaluated after the curtailment season.
- **Incentive processing** – Incentives are calculated and curtailment payments are processed and delivered directly to customers.

Participants are required to provide a dedicated meter data communication line (telephone or Internet TCP/IP) in order to use MidAmerican's Web-based software application for monitoring electric loads and curtailment performance in near-real time during curtailment events. This software also includes energy analysis modules that can help customers track and manage energy consumption and costs throughout the year. These additional modules are provided at no cost to customers. Customers also may choose to install additional systems to help their facilities meet their curtailment requirements (e.g., generators, control systems). Under the terms of the tariff riders, customers that do not fully meet their contract requirements may be penalized by MidAmerican and/or removed from the program.

Description of Outside Services

MidAmerican energy efficiency staff provide overall strategic direction for the program, including research and development, promotion, trade ally support, evaluation and other administrative functions.

MidAmerican utilizes Itron Inc.'s Curtailment Manager/Customer Care Web-based data management software application. MidAmerican regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process.

Value Proposition

Customers participating in the program receive three main benefits:

- Financial benefits in the form of incentive payments that compensate customers for reducing load during MidAmerican's system peak hours.
- Detailed information that helps them manage their energy consumption, including advice from key account managers on curtailment strategies, near-real time load monitoring and other tools available through MidAmerican's monitoring software and analyses of interval load data.
- Customers make a positive impact on future generation needs by shifting energy use away from peak times, reducing the need for construction of additional electric generation.

Market Barriers

The table below presents the key market barriers to an effective nonresidential load management program and the strategies the program uses to address each barrier. Note that these strategies may only partially offset the barriers.

Market Barriers and Strategies

Market Barriers	Program Strategies
Pending EPA rules may prevent customers with older non-compliant generators from participating	Target load shedders, shifters and customers with newer (EPA compliant) generators
Customers incur costs, lose revenue and experience operational disruptions when curtailing load	Provide financial incentives Work with customer to identify effective curtailment strategies Provide case study examples of successful curtailment strategies, including shed, shift and generate
Program requirements not well understood	Provide program brochures, contracts and tariffs that clearly explain program requirements Provide ongoing support from key account managers and program implementation staff to help customers understand program requirements
Lack of customer awareness	Targeted marketing campaign Use other nonresidential programs to recruit eligible curtailment prospects Utilize trade allies to recruit curtailment prospects
Customers do not understand their peak demand loads or potential to curtail	Work with customers to analyze summer peak load data Provide engineering assistance if needed, through Nonresidential Energy Analysis program

Incentives

Incentives are defined on the basis of dollars per contracted kilowatt demand reduction versus achieved kilowatts of reduced demand. Customers are offered either one-year or three-year contracts in which they must commit to specified curtailable load levels for all curtailment events. Payment is made at the end of the curtailment season, after MidAmerican evaluates performance. Customers delivering curtailed load below that which is required by curtailment contracts receive payment equivalent to the percentage of curtailment achieved. For example, a customer delivering

only 90 percent of its contract amount receives 90 percent of the total contract incentive. Customers cannot receive more than 100 percent of their contract incentive, even if they deliver curtailed load above their contract requirements. One-year contracts will receive $40 per kilowatt per season; three-year contracts will receive $46 per kilowatt per season.

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

Detailed incentive levels for each measure offered in this program are provided in Appendix A.

Marketing Plan

General Marketing Plan

The program is primarily marketed to the target key account customer base through one-on-one interaction with key account managers. Occasionally the program website generates leads for potential new participants.

Customer Targets

This program targets large electric customers with a minimum of 250 kilowatts of curtailable load during MidAmerican's peak demand periods. These target customers include:

- Customers with on-site generation already installed for emergency purposes.
- Industrial customers who can shed or shift process activities during system peak hours,
- Customers with energy management systems or other controls that allow them to shift or shed load during system peak hours.
- Customers in manufacturing, warehousing, hospitals, government, large offices and data/call centers.
- Customers with consistent load patterns throughout the summer period.
- Sophisticated customers with on-site energy managers.

The table below outlines customer eligibility requirements.

Customer Eligibility Parameters

	Electric Equipment
Customer Class	Nonresidential electric rates serving larger customers
Customer Status	Customer facility or business owners
Building Type	All
Business Type	All
Building Vintage	Existing and new construction
Geography	MidAmerican's Iowa electric service territory
Size	Able to provide at least 250 kilowatts of curtailable load

Trade Ally Targets

This program is primarily delivered through MidAmerican's internal staff. However, trade allies providing services and equipment that enable customer participation also can be helpful in identifying potential new participants. These include:

- Firms that sell, specify or service emergency generators
- Firms that sell, specify or service energy management systems

To support its trade allies and keep them informed of program opportunities and changes, MidAmerican maintains an active trade ally program. Further information regarding trade allies can be found in the Education program.

Promotion

The promotional strategy for this program relies primarily on one-on-one marketing to prospective customers by key account managers. The program is promoted through a program brochure that clearly explains the program, customer requirements, financial incentives and program compliance; case studies of successful curtailment strategies used by existing customers; and a program-specific Web page on MidAmerican's energy efficiency website. The program also is supported by MidAmerican's general awareness advertising.

MidAmerican Energy Company
Iowa Energy Efficiency Plan 2014-2018
Appliance Recycling Program

Description of Program

The Appliance Recycling program offers financial incentives to customers who stop using old, inefficient refrigerators, freezers and room air conditioners and helps them dispose of the old units in an environmentally responsible manner. It provides rebates to customers participating in the program and also provides free pick up and disposal of old appliances. The program is marketed under the name Appliance Recycling program.

The objectives of this program are to assist customers with disposal of their existing unit when they purchase a new one and to prevent migration of the old unit to the secondary market for used, inefficient appliances in MidAmerican's service territory. The program extends to working qualifying equipment and does not require purchase of new equipment to participate.

The program primarily targets residential electric customers, but is available to all electric customers recycling residential-sized equipment. Program measures must save energy supplied directly by MidAmerican.

Measure List

The Appliance Recycling program provides rebates and incentives for the following measures:

- Refrigerators
- Freezers
- Window air conditioners
- Energy savings leave-behind kits – including two compact flourescent lamps

Information on savings, incentives, incremental costs, and other qualifying information for all measures in this program is provided in Appendix A.

Budgets

Anticipated five-year spending for the Appliance Recycling program is as follows:

Residential Budget

Electric Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 658,088	$ 1,355,452	$ 2,013,540
2015	$ 674,540	$ 1,355,452	$ 2,029,992
2016	$ 691,404	$ 1,355,452	$ 2,046,856
2017	$ 708,689	$ 1,355,452	$ 2,064,141
2018	$ 726,406	$ 1,355,452	$ 2,081,858
Total	$ 3,459,127	$ 6,777,260	$ 10,236,387

Nonresidential Budget

Electric Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 20,353	$ 40,484	$ 60,837
2015	$ 20,862	$ 40,484	$ 61,346
2016	$ 21,384	$ 40,484	$ 61,868
2017	$ 21,919	$ 40,484	$ 62,403
2018	$ 22,467	$ 40,484	$ 62,951
Total	$ 106,985	$ 202,420	$ 309,405

There are no gas costs associated with this program.

Detailed budgets by spending category and staffing assumptions in FTEs for this program are provided in Appendix B.

Energy Savings

Anticipated savings levels for the Appliance Recycling program are as follows:

Residential Savings

Electric Savings	Annual kWh	Peak kW
2014	9,094,477	1,382
2015	9,094,477	1,382
2016	9,094,477	1,382
2017	8,849,746	1,057
2018	8,849,746	1,057
Total	44,982,923	6,259

Nonresidential Savings

Electric Savings	Annual kWh	Peak kW
2014	269,753	49
2015	269,753	49
2016	269,753	49
2017	262,176	39
2018	262,176	39
Total	1,333,610	226

There are no gas savings associated with this program.

Participation

Participation estimates for each measure offered in this program are provided in Appendix C.

Cost Effectiveness

Anticipated total net economic benefits of the program are as follows:

Residential Cost Effectiveness

Program	Electric	Gas	Total
Program Benefits	$ 11,631,538	$ -	$ 11,631,538
Program Costs	$ 7,835,586	$ -	$ 7,835,586
Net Economic Benefits	$ 3,795,951	$ -	$ 3,795,951
Societal Test Ratio	1.48	-	1.48

Nonresidential Cost Effectiveness

Program	Electric	Gas	Total
Program Benefits	$ 381,767	$ -	$ 381,767
Program Costs	$ 235,480	$ -	$ 235,480
Net Economic Benefits	$ 146,287	$ -	$ 146,287
Societal Test Ratio	1.62	-	1.62

Operations

Description of Operations

MidAmerican's program contractor will determine eligibility of appliances requested for recycling, will pick up eligible appliances at customer premises for no charge and will arrange for environmentally responsible disposal of the appliances. To be eligible for program services and rebates, appliances must be working and, for refrigerators, at least 10 cubic feet in size.

Environmentally responsible disposal involves removing chlorinated fluorocarbons (CFCs) from the refrigerant (and possibly foam insulation), preparing refrigerant for reclamation or recycling, and recycling other materials such as metal (and possibly plastic) components.

Key steps in program participation include:

- **Appliance pick-up scheduling** – The customer calls the program contractor to schedule a pickup, or is transferred by MidAmerican. The customer also may submit an online form to receive a call to schedule pickup.
- **Equipment qualification** – The program contractor determines whether the equipment is eligible for an incentive.
- **Recycling process** – The program contractor picks up the appliance, transports the appliance to a recycling facility, recycles applicable components and appropriately disposes of remaining components.
- **Tracking appliances** – The program contractor maintains documentation to demonstrate that the materials are recycled appropriately.
- **Leave behind kit** – The program contractor will leave behind an energy savings kit to promote other ways to save energy.

- **Rebate processing and database maintenance** – The program contractor and MidAmerican process rebates and maintain the database for tracking and reporting purposes.

Description of Outside Services

MidAmerican staff provides overall strategic direction for the program, conducts research and development, and provides promotion, trade ally support, evaluation and other administrative functions.

The program contractor will provide turnkey services to manage and administer the program, including marketing the program, processing applications, tracking program data, answering questions from customers and providing customer and transaction information to MidAmerican for rebate tracking.

MidAmerican currently employs Jaco Environmental for management and administrative services. MidAmerican regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process.

Value Proposition

Customers participating in the program receive three main benefits:

- Customers eliminate the hassle and cost associated with disposing of large inefficient and unwieldy appliances.
- Customers save money through rebates and reduced energy bills.
- Customers can trust that the materials in their old appliances have been recycled to the greatest extent possible and disposed of properly.

Market Barriers

The following table presents the key market barriers to a successful appliance recycling program, and the strategies the program uses to address each barrier. Note these program strategies can only partially offset the identified barriers.

Market Barriers and Strategies

Market Barriers	Program Strategies
Time required to fill out incentive forms	Provide simple forms at the time of appliance pickup Allow retail trade allies to fill in participation forms for customers at the time of equipment purchase
Lack of customer awareness	Consumer education and outreach Program promotion/advertising Promote through other residential programs Trade ally outreach sales training
Low dealer awareness	Ongoing dealer communications, outreach and education
Trade allies not selling program	Provide trade ally training and outreach to explain the benefits of participating in the program Market program and general efficiency awareness to trade allies
Time required to schedule pick up	Encourage dealers to arrange to have old units picked up directly from the customers' homes with delivery of new appliance
Customers feel they need an extra refrigerator	Customized educational materials that highlight the cost to operate an old refrigerator or freezer Explain environmental benefits of eliminating inefficient appliances

Incentives

MidAmerican offers the following financial incentives to participants:

- **Free pick up and disposal** – Customers receive free pick up and disposal of appliances.
- **Rebates** – An incentive is paid to the customer on a per-unit recycled basis.

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

Detailed incentive levels for each measure offered in this program are provided in Appendix A.

Marketing Plan

General Marketing Plan

MidAmerican will target residential sector customers using traditional retail marketing channels, provide education and outreach to customers and trade allies, to encourage customer participation.

MidAmerican will regularly review and update customer-facing program information and marketing materials as part of its internal program evaluation process, and adjust materials as needed based on program adjustments and market characteristics.

Trade Ally Targets

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

- Appliance stores
- Electronics stores
- Home improvement stores

Trade allies play a key role in promoting the program. To support its trade allies and keep them informed of program opportunities and changes, MidAmerican maintains an active trade ally program. Further information regarding trade allies can be found in the Education program.

Customer Targets

This program primarily targets residential electric customers who own working refrigerators, freezers or air conditioners as well as customers purchasing new appliances. Non-residential customers are welcome to participate but are not aggressively targeted. One of the objectives of this program is to prevent customers who currently use one qualifying appliance from keeping their existing units when they purchase new ones. Also, the program is designed to prevent growth in the secondary market for used, inefficient appliances in MidAmerican's service territory.

The table below outlines customer eligibility requirements.

Customer Eligibility Parameters

	Electric Customers
Customer Class	All electric rates
Customer Status	All
Building Type	All
Building Vintage	All
Geography	MidAmerican Iowa electric service territory
Size	All

Promotion

MidAmerican will promote the program through periodically inserting program information with customer bills. The bill insert will reference the energy efficiency website, which features a dedicated Web page that includes program information and qualification requirements, an online form to submit contact information to schedule a pickup, and a program brochure. A reference to the energy efficiency website will appear quarterly on customer bills.

Program referrals are expected from retail trade allies. The program contractor will partner with retail stores to pick up an old refrigerator for recycling during the delivery of a new refrigerator. Information will be available on the energy efficiency website to assist trade allies in marketing and delivering energy-efficient products and services to customers, while encouraging participation in energy efficiency programs. The website offers trade allies the opportunity to order program materials, learn about program changes, and provide contact information for future communications. To keep trade allies informed and engaged with the program, MidAmerican will periodically email program information and provide point-of-sale information to appliance dealers. MidAmerican's Trade Ally Central website provides additional resources for trade ally engagement.

MidAmerican Energy Company
Iowa Energy Efficiency Plan 2014-2018
Upstream Retail Lighting Program

Description of Program

The Upstream Retail Lighting program promotes the purchase of energy-efficient equipment by customers in new and existing buildings. The program coordinates with upstream suppliers and retailers to discount the selling price of the efficient lamp, providing retailers with incentives to allow them to lower the selling price of efficient lighting. Targeted lighting includes compact fluorescent lamps and light emitting diodes. The program is marketed under the name *Be Bright!*

The program is available to all residential and nonresidential customers and landlords for both new and existing buildings in MidAmerican's Iowa service area. Program measures must save electricity supplied directly by MidAmerican.

Measure List

The Upstream Retail Lighting program provides rebates and incentives for the following measures:

- Compact fluorescent lamps – CFL's
- Light emitting diodes – LED's
- Specialty lighting
- Exterior lighting

Information on savings, incentives, incremental costs, and other qualifying information for all measures in this program is provided in Appendix A.

Budgets

Anticipated five-year spending for the Upstream Retail Lighting program is as follows:

Residential Spending

Electric Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 344,605	$ 1,189,737	$ 1,534,342
2015	$ 353,220	$ 1,200,937	$ 1,554,157
2016	$ 362,051	$ 1,214,377	$ 1,576,428
2017	$ 371,102	$ 1,230,507	$ 1,601,609
2018	$ 380,380	$ 1,249,857	$ 1,630,237
Total	$ 1,811,358	$ 6,085,416	$ 7,896,774

There are no gas costs associated with this program.

Detailed budgets by spending category and staffing assumptions in FTEs for this program are provided in Appendix B.

Energy Savings

Anticipated savings levels for the Upstream Retail Lighting program are as follows:

Residential Savings

Electric Savings	Annual kWh	Peak kW
2014	25,260,718	3,016
2015	25,301,123	3,021
2016	25,349,609	3,027
2017	25,229,446	3,012
2018	25,299,247	3,021
Total	126,440,143	15,097

There are no gas savings associated with this program.

Participation

Participation estimates for each measure offered in this program are provided in Appendix C.

Cost Effectiveness

Anticipated total net economic benefits of the program are as follows:

Residential Cost Effectiveness

Program	Electric	Gas	Total
Program Benefits	$ 38,924,068	$ -	$ 38,924,068
Program Costs	$ 14,694,472	$ -	$ 14,694,472
Net Economic Benefits	$ 24,229,596	$ -	$ 24,229,596
Societal Test Ratio	2.65	-	2.65

Operations

Description of Operations

The Upstream Retail Lighting program is delivered by MidAmerican's contractor in partnership with lighting manufacturers, retail outlets and lighting distributors selling qualifying lighting products.

Key steps in program participation include:

- **Equipment qualification** – The program contractor determines whether the lighting is eligible for an incentive. The program contractor conducts a regional bidding process that allows retailers and manufacturers to qualify the type and quantity of eligible lighting products.
- **Program participation** – The customer purchases the eligible lighting during the campaign. The rebate is applied to the purchase price of the lighting product. The retailer provides sales data to program contractor.

- **Rebate processing and database maintenance** – The program contractor processes incentive payments to the retailer and maintains the database for tracking and reporting purposes.
- **Verification** – The program contractor verifies that retailer signage and pricing meets program guidelines. The program contractor also verifies levels of participation by obtaining register sales data from each retailer.

Description of Outside Services

MidAmerican staff provide overall strategic direction for the program, as well as conduct research and development, promotion, evaluation and other administrative functions.

MidAmerican uses a single contractor to deliver the program. The contractor handles coordinating manufacturers, retailers and lighting distributors, tracking program data, providing retail training, providing retail signage, answering questions from dealers and customers, and coordinating rebate distribution to retail partners and lighting distributors.

MidAmerican currently contracts with Wisconsin Energy Conservation Corporation for management and administrative services. MidAmerican regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process.

Value Proposition

Customers participating in the program receive four main benefits:

- Customers save money in the short term through lower purchase prices and in the long term through lower utility bills.
- Customers receive education about high quality, energy-efficient lighting from a trustworthy source through informational point-of-sale signage.
- Customers receive financial assistance through lower purchase prices and information to assist them in transitioning to new technology.
- The process is simple and straightforward. Lighting rebates are accessible to any qualifying customer for any qualifying equipment. There are no rebate forms to process.

Market Barriers

The table below presents the key market barriers to an effective retail lighting program, as well as strategies the program uses to address each barrier. Note these program strategies can only partially offset the identified barriers.

Market Barriers and Strategies

Market Barriers	Program Strategies
Higher first cost of energy-efficient equipment	Offer rebates Educate customers on the long-term energy cost-saving benefits of higher efficiency equipment
Time required to fill out rebate forms	Point-of-sale rebates for *Be Bright* campaign eliminates the need for forms
Customers unawareness with the technology	Educate consumers on the new technologies like LED's through point of purchase signage Provide customers with the results from "Top 10" testing of lighting products to assist them in determining and purchasing the right product for their specific need
Customers don't bother to look for qualifying measures	Retailer training to help customers quickly identify appropriate products In-store information signage Market program and general efficiency awareness to customers Provide efficiency education to customers
Trade allies not up-selling to high-efficiency lighting	Provide trade ally training and outreach to explain the benefits of selling higher efficiency lighting Market program and general efficiency awareness to trade allies
Lack of availability of qualifying lighting	Promote programs to customers so they ask for qualifying lighting and dealers stock it Trade ally training Upstream market support in Be Bright! campaign

Market Barriers	Program Strategies
Customers don't understand the long-term value of high-efficiency lighting	Train trade allies to explain life-cycle costs to customers Market program and general efficiency awareness to customers Provide efficiency education to customers
Dealers are unaware of program	Provide outreach and marketing to dealers

As both residential and nonresidential customers are eligible for the program, there is a chance that nonresidential customers may purchase a qualifying product from one of the participating retailers or lighting distributors and then send in for an additional rebate through the Nonresidential Equipment program, which provides rebates for the same measures.

MidAmerican has a procedure in place to check the lighting rebate application invoice against the list of participating retailers and lighting distributors and verify the model numbers of the lighting products. In cases where the customer has already received a rebate through the lower point-of-sale purchase price, the customer would be notified that they already received an upstream rebate and no additional rebates are available. As many nonresidential customers purchase lighting materials from a single lighting distributor, it is necessary to offer these qualified products in the Nonresidential Equipment program. Otherwise an electrical contractor doing a lighting remodel would have to purchase from multiple lighting retailers and electrical distributors. This may be difficult in rural areas.

Incentives

The program provides incentives to retailers to provide lower prices at the cash register on a per-product basis to program participants purchasing qualifying lighting products. The rebate will be a fixed amount per lighting product. The retailer provides sales data to the program contractor for payment.

The program contractor sets the incentive pricing through a regional bidding process with retailers and manufacturers. MidAmerican performs an annual review of rebate levels and performance criteria and may adjust rebates in the future as market conditions change.

Detailed incentive levels for each measure offered in this program are provided in Appendix A.

Marketing Plan

General Marketing Plan

MidAmerican will target residential sector customers using traditional retail marketing channels and nonresidential sector customers through the lighting distributors. MidAmerican will provide education and outreach to customers and trade allies organizations to encourage customer participation and implementation of energy efficient measures and equipment.
MidAmerican will regularly review and update customer-facing program information and marketing materials as part of its internal program evaluation process, and adjust materials as needed based on program adjustments and market characteristics.

Customer Targets

The target market for this program includes residential customers and nonresidential customers in existing and new buildings. The program also uses tariff rates to target and qualify customers.

The table below outlines customer eligibility requirements.

Customer Eligibility Parameters

	Electric Equipment
Customer Class	Residential and nonresidential electric rates
Customer Status	All customers
Building Type	Single-family; Multi-family; Mobile home, Non residential
Building Vintage	Existing and new construction
Geography	MidAmerican Iowa electric service territory

Trade Ally Targets

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

- Big-box retail stores
- Hardware stores
- Home improvement stores
- Grocery stores
- Discount retailers
- Lighting distributors

Trade allies play a key role in implementing the program. To support its trade allies and keep them informed of program opportunities and changes, the program contractor actively recruits, trains and engages the retailer to encourage participation.

Promotion

MidAmerican will promote the program through bill inserts, newspaper advertising, radio advertising, online advertising, cooperative advertising and educational fact sheets. The bill inserts will reference the dedicated *Be Bright*! website. MidAmerican will purchase advertising in coordination with other participating utilities and provide funds to retailers for cooperative advertising.

MidAmerican call center associates will recommend the program to likely participants and, when appropriate, transfer customers to the program call center operated by the program contractor.

Program referrals are also expected from trade allies. The program contractor will recruit and train participating retailers on benefits of efficient lighting products. Program information will be available on a dedicated Iowa program website, which features a store locator and educational information.

MidAmerican Energy Company
Iowa Energy Efficiency Plan 2014-2018
Low-Income Program

Description of Program

The Low-Income program provides financial incentives and education to encourage energy efficiency in existing low-income housing. The program is delivered through four separate components to meet the needs of different customer segments. The program includes three residential components – weatherization, Energy Wise and Home Energy Reports, and a multi-family component. Weatherization only addresses single-family housing whereas Energy Wise and Home Energy Reports also are available to apartment dwellers.

The weatherization program is delivered through the Iowa Department of Human Rights (IDHR), which contracts with local community action program (CAP) agencies and other subcontractors to deliver program services. The Energy Wise program is delivered by the CAP agencies with guidance and training provided by an implementation contractor employed by MidAmerican, Interstate Power & Light Company (IPL) and Black Hills Energy (Black Hills). The Home Energy Report component is new and consists of the Home Energy Reports described in the Residential Behavioral program, with messaging specifically crafted for low-income customers.

The Low-Income program also includes a fourth component; multifamily, which includes institutional housing and emergency shelters. The multifamily component is delivered by an implementation contractor in cooperation with IPL and Black Hills. Participants in the multifamily component may be served on residential rates, nonresidential rates or a combination of both. Therefore, expenditures on the multifamily component will be tracked in both the residential and nonresidential budgets for the program, consistent with the meter(s) at the respective participating facilities. The various components of this program are described below.

Weatherization

In this component, MidAmerican provides funding to supplement the IDHR's existing low-income weatherization program funded by the Federal Weatherization Assistance Program (WAP). Weatherization services include energy assessments and direct installation of energy efficiency measures and are delivered by CAP agencies throughout MidAmerican's service area.

Energy Wise Education

In this component, CAP agencies provide low-income clients with educational workshops and low-cost energy efficiency measures for self-installation. This program is delivered to the CAP agencies by a program implementation contractor.

Home Energy Reports

With this component, MidAmerican will send Home Energy Reports to approximately 20,000 Low Income Home Energy Assistance Program (LIHEAP) eligible customers. The reports will be tailored to include low-cost and no cost energy efficiency tips.

Multifamily

This component targets existing eligible low-income multifamily housing, including institutional housing and emergency shelters for energy assessments, provision of low-cost measures for self-installation by property owners or managers and rebates for larger energy efficiency measures.

Measure List

The Low Income program provides rebates and incentives for the following measures:

- Energy-efficient showerheads
- Faucet aerators
- Pipe insulation
- Compact fluorescent light bulbs
- Programmable thermostats
- High-efficiency natural gas furnaces
- Appliances: refrigerators and freezers
- Clean and tune natural gas furnaces
- Infiltration measures
- Insulation measures
- General repairs in support of successful application of efficiency measures
- Energy Wise Home Savings Kits
- Custom measures and projects for multifamily facilities based on assessment findings and recommendations

Information on savings, incentives, incremental costs, and other qualifying information for all measures in this program is provided in Appendix A.

Budgets

Anticipated five-year spending for the Low Income program is as follows:

Residential Budgets

Electric Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 288,607	$ 745,470	$ 1,034,077
2015	$ 295,822	$ 696,356	$ 992,178
2016	$ 303,218	$ 703,661	$ 1,006,879
2017	$ 310,798	$ 705,342	$ 1,016,140
2018	$ 318,568	$ 705,458	$ 1,024,026
Total	$ 1,517,013	$ 3,556,287	$ 5,073,300

Gas Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 288,607	$ 2,634,157	$ 2,922,764
2015	$ 295,822	$ 2,614,246	$ 2,910,068
2016	$ 303,218	$ 2,610,746	$ 2,913,964
2017	$ 310,798	$ 2,610,070	$ 2,920,868
2018	$ 318,568	$ 2,613,849	$ 2,932,417
Total	$ 1,517,013	$ 13,083,068	$ 14,600,081

Total Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 577,214	$ 3,379,627	$ 3,956,841
2015	$ 591,644	$ 3,310,602	$ 3,902,246
2016	$ 606,436	$ 3,314,407	$ 3,920,843
2017	$ 621,596	$ 3,315,412	$ 3,937,008
2018	$ 637,136	$ 3,319,307	$ 3,956,443
Total	$ 3,034,026	$ 16,639,355	$ 19,673,381

Nonresidential Budgets

Electric Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 3,769	$ 28,102	$ 31,871
2015	$ 3,863	$ 28,241	$ 32,104
2016	$ 3,960	$ 28,253	$ 32,213
2017	$ 4,059	$ 28,300	$ 32,359
2018	$ 4,160	$ 28,049	$ 32,209
Total	$ 19,811	$ 140,945	$ 160,756

Gas Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 3,769	$ 40,992	$ 44,761
2015	$ 3,863	$ 40,853	$ 44,716
2016	$ 3,960	$ 40,841	$ 44,801
2017	$ 4,059	$ 40,794	$ 44,853
2018	$ 4,160	$ 41,045	$ 45,205
Total	$ 19,811	$ 204,525	$ 224,336

Total Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 7,538	$ 69,094	$ 76,632
2015	$ 7,726	$ 69,094	$ 76,820
2016	$ 7,920	$ 69,094	$ 77,014
2017	$ 8,118	$ 69,094	$ 77,212
2018	$ 8,320	$ 69,094	$ 77,414
Total	$ 39,622	$ 345,470	$ 385,092

Detailed budgets by spending category and staffing assumptions in FTEs for this program are provided in Appendix B.

Energy Savings

Anticipated savings levels for the Low- Income program are as follows:

Residential Savings

Electric Savings	Annual kWh	Peak kW
2014	3,440,569	904
2015	2,306,344	529
2016	1,286,119	192
2017	1,122,894	137
2018	1,128,669	138
Total	9,284,595	1,900

Gas Savings	Annual Therms	Peak Therms
2014	234,208	2,673
2015	188,798	2,079
2016	162,788	1,737
2017	169,978	1,826
2018	170,368	1,827
Total	926,140	10,142

Nonresidential Savings

Electric Savings	Annual kWh	Peak kW
2014	10,821	4
2015	10,821	4
2016	10,821	4
2017	10,821	4
2018	10,821	4
Total	54,104	20

Gas Savings	Annual Therms	Peak Therms
2014	3,274	22
2015	3,274	22
2016	3,274	22
2017	3,274	22
2018	3,274	22
Total	16,372	111

Participation

Participation estimates for each measure offered in this program are provided in Appendix C.

Cost Effectiveness

Anticipated total net economic benefits of the program are as follows:

Residential Cost Effectiveness

Program	Electric	Gas	Total
Program Benefits	$ 3,284,910	$ 10,088,950	$ 13,373,861
Program Costs	$ 4,840,936	$ 13,930,888	$ 18,771,824
Net Economic Benefits	$ (1,556,025)	$ (3,841,938)	$ (5,397,963)
Societal Test Ratio	0.68	0.72	0.71

Nonresidential Cost Effectiveness

Program	Electric	Gas	Total
Program Benefits	$ 115,709	$ 436,925	$ 552,634
Program Costs	$ 153,374	$ 214,041	$ 367,415
Net Economic Benefits	$ (37,665)	$ 222,884	$ 185,219
Societal Test Ratio	0.75	2.04	1.50

Operations

Description of Operations

MidAmerican provides a comprehensive program designed to reach low-income customers in a variety of situations. MidAmerican assists qualified LIHEAP residential customers by providing funds for assessments and weatherization assistance for occupants of single-family dwellings, education and low-cost efficiency measures for apartment dwellers and Home Energy Reports with no-cost and low-cost energy-saving tips and information to a cross-section of low-income customers. Free assessments and low-cost energy savings measures are provided to qualified multifamily low-income housing, which includes low-income and institutional housing and emergency shelters. These multifamily customers are also eligible for rebates to assist with energy efficiency projects.

Each component of the program employs a different implementation strategy, as outlined below.

Weatherization

Implementation is delivered through local CAP agencies responsible for promotion, qualification, assessments and installations, administration, data tracking and support of program-wide evaluation efforts.

Key steps in the weatherization component include:

- **Determine eligibility** – Identifying customers that qualify for LIHEAP and prioritizing them according to utility bills, income level and other criteria.
- **Complete on-site assessments** – Completing on-site energy assessments, during which auditors directly install simple energy efficiency measures and evaluate eligibility for a

predetermined list of more complex measures, such as building insulation and replacement of furnaces, water heaters and appliances.
- **Install measures** – Coordinating, where appropriate, with network contractors for measure installation.
- **Document results** – Documenting program results for IDHR and MidAmerican.

Energy Wise

This component is coordinated by local CAP agencies for implementation.

Key steps in the Energy Wise component include:

- **Train the trainers** – Recruiting participants for energy efficiency train the trainer (T3) training, which provides trainers with tools to introduce energy education and low-cost energy efficiency measures to eligible customers.
- **Distribute kits** – Distribution of Energy Wise kits containing low-cost energy efficiency measures to CAP agencies for redistribution to Energy Wise participants.
- **Deliver program** – Outreach to qualified CAP agency clients by Energy Wise trainers, either in classrooms or one-on-one settings, during which trainers discuss installation of energy efficiency measures as well as energy-saving techniques and behaviors.
- **Install measures** – Self-installation by the participants of the kit measures and adoption of other energy-saving behaviors by Energy Wise participants.
- **Report results** – Reporting on pre-installation energy usage and success installing the various measures to support program-wide evaluation efforts.

Home Energy Reports

The operations of this component are detailed in the Residential Behavioral report. Home Energy Reports for the Low Income program will operate identically to those in the Residential Behavioral program with the following two exceptions:

- **Tailored tips** – The tips found in the reports will be tailored for low income participants.
- **Provide data** – MidAmerican will provide a supplemental data feed to the implementation contractor listing all Iowa customers that qualified for LIHEAP assistance so the implementation contractor can choose 20,000 participants and a suitable control group for the required statistical comparisons.

Multifamily

The multifamily component targets existing low-income housing, institutional housing and emergency shelters. This component provides energy assessments, low-cost measures for installation by building owners and incentives for more complex measures identified during the assessments. Pre-qualification of participants is conducted based on eligibility for program assistance. A multifamily property must be housing developed under Section 8 of the U.S. Housing Act of 1937 or Low-Income Housing Tax Credit Property under the Tax Reform Act of 1986 to be eligible. Participants in the multifamily component may be served on residential rates, nonresidential rates or a combination of both. Participants generally are property management companies or multifamily housing property owners.

Key steps in the multifamily component include:

- **Contact customers** – Contacting qualifying customers to discuss the program and its benefits and requirements.
- **Schedule assessment** – Scheduling energy assessments for customers interested in participating.
- **Complete assessment** – Completing on-site assessments, during which auditors evaluate measures eligible for rebates.
- **Provide low-cost measures** – Providing low-cost measures for self-installation in individual units.
- **Review report recommendations** – Providing an assessment report, which recommends cost-effective measures, such as improvements to the building shell, central heating and cooling equipment and lighting, in common areas and in tenant-occupied space.
- **Work with contractors** – Coordinating, where appropriate, with contractors for measure installation.
- **Process rebates** – Processing rebate applications and issuing rebates from MidAmerican.
- **Verify measures** – Verifying measure installation for a sample of participants.

Description of Outside Services

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.

Local CAP agencies are responsible for qualifying single-family households for the program when they apply for Federal LIHEAP assistance and for delivering services to LIHEAP-eligible customers. Additionally, other implementation contractors support the program and deliver program services.

The IDHR submits monthly reports to MidAmerican outlining participation levels and installed measures for the weatherization component. Each year, the IDHR, through a contractor retained by IDHR and the investor-owned utilities, submits an annual Statewide Low-Income Collaborative Evaluation (SLICE) report detailing program expenditures and savings of the weatherization component.

MidAmerican currently contracts with the Iowa Department of Human Rights, The Cadmus Group, Inc., The Energy Group, Inc., Dalhoff Associates, and Opower, Inc. for administration and evaluation services. MidAmerican regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process.

Value Proposition

Customers participating in the program receive four main benefits:

- Trustworthy energy-savings recommendations from trained auditors.
- Immediate savings through the direct installation of low-cost lighting, water heating and other energy-saving measures.
- Additional savings through the beneficial educational aspects of Energy Wise and Home Energy Reports.
- Significant savings, increased comfort and increased property values through rebates on insulation, lighting and other efficiency projects.

Market Barriers

The table below presents the key market barriers to an effective low-income program, and strategies the program uses to address each barrier. Note these program strategies can only partially offset the identified barriers.

Market Barriers and Strategies

Market Barriers	Program Strategies
Higher initial cost of energy-efficient equipment	Provide direct installation of low-cost measures Provide free Energy Wise kits Provide free weatherization and equipment measures Offer rebates and financing to multifamily building owners Educate customers on the long-term energy cost-saving benefits of higher efficiency equipment
Lack of customer awareness	Provide customer marketing and outreach Provide efficiency and energy usage education Provide free Home Energy Reports Provide free energy assessments
Customers reluctant to ask for help	Work through CAP agencies, which have existing relationships with customers Provide confidential program qualification and implementation process

Incentives

The program offers participants the following types of financial incentives.

- **Free energy assessments** – Free energy assessments are provided for customers participating in the weatherization and multifamily components.
- **Full subsidies** – Full subsidies are offered for most low-cost measures directly installed during the assessment and for higher cost energy efficiency measures specified during weatherization assessments. Likewise, training and home energy kits provided to Energy Wise participants are fully subsidized.
- **Home Energy Reports** – Home Energy Reports are provided free of charge. This strategy is intended to fully overcome market barriers concerning cost, perceived quality and the time and effort required for installation as well as to address behavioral issues regarding participants' energy use.
- **Rebates** – Rebates are offered for participants in the multifamily component and are set at 40 percent of the installed cost of cost-effective measures specified during the on-site energy assessment. In the multifamily component, MidAmerican defines cost-effective measures as those having a customer payback that is shorter than the expected lifetime of the measure. For measures identified during the on-site energy assessment that do not meet this definition of cost-effectiveness, MidAmerican provides a rebate that is five times the annual energy bill savings.

The table below outlines the current schedule used to reimburse the IDHR and participating CAP agencies for program measures. The reimbursement limit is intended to cover 100 percent of the costs required to install eligible measures and also to cover the administrative costs required by the IDHR and the agencies to operate the program. This schedule will be reviewed and updated as required when MidAmerican and IDHR enter into a new weatherization agreement for the years 2014-2018.

Iowa Reimbursement Limits for Low-Income Measures

Measure	Minimum Efficiency Level and Performance Criteria (if applicable)	Reimbursement Limit
Low-flow showerheads	2.0 GPM – max 2 per house	$10 each
Faucet aerators	1.5 GPM Brass with chrome finish – max 3 per house	$3 each
Pipe insulation	Rigid 0.5" foam with 0.75" diameter – max 2 3-foot sections per house	$3 each
Compact fluorescent light bulbs	5 to 30 watts ENERGY STAR®-labeled – max 2 per house	$15 each
3-way compact fluorescent light bulbs	5 to 30 watts ENERGY STAR-labeled	$10 each
Programmable thermostat	Must be 7-day, 5 + 2 day or 5-1-1 day program	$100
High-efficiency furnace	92+% AFUE in single-family homes or 90+% AFUE in mobile homes – max 1 per house	$3,000
Natural gas water heater	0.62 EF – max 1 per house	$1,300
Electric water heater	Where no gas service or it is infeasible to install gas water heater – 0.89 EF – max 1 per house	$1,000
Venting for furnace or water Heater		$150 each
Refrigerator	Replacement is indicated based on baseload appliance rating tool (BART) test – max 1 per house	$800
Freezer	Replacement is indicated based on BART test – max 1 per house	$600
Clean and tune natural gas furnace	May be performed on 1 existing natural gas furnace per house, regardless of efficiency	$125
Infiltration measures	Caulking and sealing of whole house as indicated by initial assessment including attic bypass sealing	$400
Insulation measures	Includes wall, attic, floor or foundation, duct and band joist insulation or a combination thereof*	$4,000
General repairs	In support of successful application of efficiency measures	$300

* CAPs may request a waiver when home size requires additional insulation to achieve the required goal.

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

Detailed incentive levels for each measure offered in this program are provided in Appendix A.

Marketing Plan

General Marketing Plan

All marketing and outreach for MidAmerican's single-family low-income components is performed by the CAP agencies using their existing network and infrastructure, supported by MidAmerican's general awareness advertising. All marketing and outreach for MidAmerican's multifamily low-income program is performed by the implementation contractor retained by the investor-owned utilities. The Energy Wise implementation contractor works with the CAP agencies to determine the required number of Energy Wise Home Savings Kits and endeavors to increase utilization. Home Energy Reports participants are selected by the implementation contractor.

Customer Targets

This program is available to qualified low-income customers in existing single-family housing as well as property management companies and landlords serving customers in existing qualifying low-income multifamily housing, institutional housing and emergency shelters. Program measures must save energy supplied directly by MidAmerican. To participate in the program, customers must meet income and other guidelines of the Federal LIHEAP, U.S. Department of Housing and Urban Development or equivalent assistance programs.

The table below outlines customer eligibility requirements for equipment-components of the program.

Customer Eligibility Parameters

	Electric Equipment	Natural Gas Equipment
Customer Class	Residential electric rate or commercial (for multifamily) electric rate	Residential natural gas rate or commercial (for multifamily) natural gas rate
Customer Status	Customer homeowners; Property managers or landlords of customers	Customer homeowners; Property managers or landlords of customers
Building Type	Single-family; Mobile home; Multifamily	Single-family; Mobile home; Multifamily
Building Vintage	Existing construction	Existing construction
Geography	MidAmerican Iowa electric service territory*	MidAmerican Iowa natural gas service territory*

The table below outlines customer eligibility requirements for educational components of the program.

Customer Eligibility Parameters

	Energy Wise	Home Energy Reports
Customer Class	Residential electric rate or residential natural gas rate	Residential electric rate and residential natural gas rate
Customer Status	Eligible for LIHEAP	Eligible for LIHEAP
Building Type	No restrictions	No restrictions
Building Vintage	Existing construction	Existing construction
Geography	MidAmerican Iowa electric or natural gas service territory*	MidAmerican Iowa electric or natural gas service territory

*When possible, MidAmerican will coordinate with other participating utilities in a joint effort.

Trade Ally Targets

Most of the trade allies needed to support the weatherization component work as subcontractors to the CAP agencies responsible for program administration. Additionally, HVAC contractors and appliance dealers provide replacement equipment for qualifying participants.

Trade allies supporting the multifamily component include:

- Insulation installers
- Window retailers and installers
- HVAC dealers and installers
- Lighting dealers and installers

To support its trade allies and keep them informed of program opportunities and changes, MidAmerican maintains an active trade ally program. Further information regarding trade allies can be found in the Education program.

Promotion

All marketing and outreach for MidAmerican's single-family weatherization component is performed by the CAP agencies using their existing network and infrastructure, supported by MidAmerican's general awareness advertising. All marketing and outreach for the Energy Wise component is performed by the CAP agencies and the implementation contractor. No marketing is required for the Home Energy Report component as participants are selected by the implementation contractor. All marketing and outreach for MidAmerican's multifamily low-income program is performed by the implementation contractor retained by the investor-owned utilities.

MidAmerican Energy Company
Iowa Energy Efficiency Plan 2014-2018
Multifamily Housing Program

Description of Program

The Multifamily Housing program provides services and incentives to serve the specific needs of multifamily housing building owners and property managers to help improve the overall energy efficiency of their facilities and reduce the operating costs. The program provides comprehensive on-site energy assessments to identify areas of high energy use, recommend energy-savings opportunities, and provide information on available incentives. A comprehensive assessment report includes recommendations for multifamily housing buildings. The program promotes the purchase of high-efficiency equipment through prescriptive and custom incentives.

The on-site assessment is available to owners of multifamily buildings that contain four or more units that receive electricity and/or natural gas supplied directly from MidAmerican.

Transportation gas customers with daily metering are ineligible for gas measures. However, customers with monthly metering under the Monthly Metered Transportation Service gas tariff are eligible for energy efficiency incentives.

Measure List

The Multifamily Housing program provides rebates and incentives for the following measures:

Direct install measures

- Compact fluorescent lamps
- Low-flow showerheads
- Bathroom and kitchen faucet aerators
- LED exit light kits

Any prescriptive or cost effective custom energy efficiency measure is potentially eligible for rebate under the Multifamily Housing program. Typical measures include:

- Heating and cooling equipment
- Water heating equipment
- Appliances – clothes washers, freezers and refrigerators
- Common area lighting
- Insulation – wall and attic/roof/ceiling

Information on savings, incentives, incremental costs, and other qualifying information for all measures in this program is provided in Appendix A.

MidAmerican performs an annual review of qualifying equipment and may adjust direct install measures, follow-up measures and eligibility levels in the future as market conditions and equipment standards change.

Budgets

Anticipated five-year spending for the Multifamily Housing program is as follows:

Residential Spending

Electric Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 112,470	$ 3,160,476	$ 3,272,946
2015	$ 115,282	$ 3,741,096	$ 3,856,378
2016	$ 118,164	$ 4,330,854	$ 4,449,018
2017	$ 121,118	$ 4,932,063	$ 5,053,181
2018	$ 124,146	$ 5,540,752	$ 5,664,898
Total	$ 591,180	$ 21,705,242	$ 22,296,422

Gas Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 168,706	$ 255,774	$ 424,480
2015	$ 172,924	$ 307,611	$ 480,535
2016	$ 177,247	$ 361,007	$ 538,254
2017	$ 181,678	$ 417,028	$ 598,706
2018	$ 186,220	$ 476,125	$ 662,345
Total	$ 886,775	$ 1,817,545	$ 2,704,320

Total Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 281,176	$ 3,416,251	$ 3,697,427
2015	$ 288,206	$ 4,048,707	$ 4,336,913
2016	$ 295,411	$ 4,691,862	$ 4,987,273
2017	$ 302,796	$ 5,349,091	$ 5,651,887
2018	$ 310,366	$ 6,016,877	$ 6,327,243
Total	$ 1,477,955	$ 23,522,787	$ 25,000,742

Nonresidential Spending

Electric Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 18,124	$ 1,480,244	$ 1,498,368
2015	$ 18,577	$ 1,744,499	$ 1,763,076
2016	$ 19,041	$ 2,016,326	$ 2,035,367
2017	$ 19,517	$ 2,289,102	$ 2,308,619
2018	$ 20,005	$ 2,553,437	$ 2,573,442
Total	$ 95,264	$ 10,083,608	$ 10,178,872

Gas Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 42,289	$ 981,206	$ 1,023,495
2015	$ 43,346	$ 1,164,084	$ 1,207,430
2016	$ 44,430	$ 1,356,614	$ 1,401,044
2017	$ 45,541	$ 1,553,154	$ 1,598,695
2018	$ 46,680	$ 1,763,272	$ 1,809,952
Total	$ 222,286	$ 6,818,329	$ 7,040,615

Total Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 60,413	$ 2,461,450	$ 2,521,863
2015	$ 61,923	$ 2,908,583	$ 2,970,506
2016	$ 63,471	$ 3,372,940	$ 3,436,411
2017	$ 65,058	$ 3,842,256	$ 3,907,314
2018	$ 66,685	$ 4,316,709	$ 4,383,394
Total	$ 317,550	$ 16,901,938	$ 17,219,488

Detailed budgets by spending category and staffing assumptions in FTEs for this program are provided in Appendix B.

Energy Savings

Anticipated savings levels for the Multifamily Housing program are as follows:

Residential Savings

Electric Savings	Annual kWh	Peak kW
2014	7,323,986	1,093
2015	8,597,644	1,283
2016	9,870,465	1,472
2017	11,147,563	1,663
2018	12,416,704	1,852
Total	49,356,362	7,363

Gas Savings	Annual Therms	Peak Therms
2014	98,401	311
2015	115,532	364
2016	132,428	416
2017	149,401	468
2018	166,473	521
Total	662,235	2,080

Nonresidential Savings

Electric Savings	Annual kWh	Peak kW
2014	1,340,652	354
2015	1,569,669	415
2016	1,807,769	477
2017	2,039,795	540
2018	2,275,143	602
Total	9,033,029	2,387

Gas Savings	Annual Therms	Peak Therms
2014	184,235	1,216
2015	216,512	1,431
2016	248,567	1,642
2017	281,090	1,859
2018	313,629	2,077
Total	1,244,033	8,225

Participation

Participation estimates for each measure offered in this program are provided in Appendix C.

Cost Effectiveness

Anticipated total net economic benefits of the program are as follows:

Residential Cost Effectiveness

Program	Electric	Gas	Total
Program Benefits	$ 44,193,072	$ 22,452,347	$ 66,645,419
Program Costs	$ 23,893,101	$ 2,588,873	$ 26,481,974
Net Economic Benefits	$ 20,299,971	$ 19,863,475	$ 40,163,446
Societal Test Ratio	1.85	8.67	2.52

Nonresidential Cost Effectiveness

Program	Electric	Gas	Total
Program Benefits	$ 13,438,411	$ 33,534,649	$ 46,973,060
Program Costs	$ 11,430,192	$ 7,663,184	$ 19,093,376
Net Economic Benefits	$ 2,008,219	$ 25,871,465	$ 27,879,684
Societal Test Ratio	1.18	4.38	2.46

Operations

Description of Operations

MidAmerican provides free on-site energy assessments and direct install measures to requesting multifamily housing building owners and managers. Energy assessments are performed by a program contractor with expertise in building envelope, common area energy-using equipment, and energy use within the apartments themselves. Recommendations and energy efficiency program information are provided to assist property owners in completing projects and obtaining available prescriptive and custom incentives.

Key steps in program participation include:

- **On-site assessment scheduling** – The customer calls the program contractor to schedule an assessment, or is transferred by MidAmerican. The customer also may submit an online form to receive a call to schedule an assessment.

- **Assessment screening** – The program contractor screens the caller to determine the number of units or buildings in a complex; type of building (e.g. apartments, condominiums, mixed-use); central or individual heating and cooling systems; any specialized commercial equipment; and residential or commercial utility meter(s).
- **On-site assessment completion** – The program contractor performs a walkthrough energy assessment to visually inspect energy-using equipment, informs building owners of ways to operate building energy systems more efficiently, reviews energy usage and cost patterns found in historic energy bills, evaluates eligibility for financial incentives for additional measures, and provides contact information as well as information regarding how to participate in MidAmerican's other energy efficiency programs.
- **Direct-install measures** – Either during the multifamily housing assessment or scheduled shortly thereafter, the program contractor installs energy saving measures within the apartment units. Such measures may include LED exit light kits, compact fluorescent lamps, low-flow shower heads, and faucet aerators.
- **Assessment report** – The program contractor provides the building owner an assessment report that includes recommendations for energy efficiency projects. The report also provides website addresses for additional rebate information and applications. During program design, appropriate timelines for report delivery will be established to ensure adequate analysis and timeliness to the customer.
- **Rebate application** – When a customer completes a prescriptive or custom project as a result of their assessment, they submit an application form for review and processing.
- **Rebate processing and database maintenance** – The program contractor and MidAmerican process rebates and maintain the database for tracking and reporting purposes.
- **Verification** – The program contractor conducts verification on a sample of measure installations.

Description of Outside Services

MidAmerican staff provides overall strategic direction for the program, conducts research and development and provides promotion, trade ally support, evaluation and other administrative functions.

MidAmerican uses two program contractors to help deliver the program. One contractor handles program enrollment and data tracking, and works directly with customers to conduct the on-site energy assessments. The other contractor handles associated rebate processing for recommended measures that are installed following an assessment.

MidAmerican currently employs Franklin Energy Services LLC and A-TEC Energy Corporation for administrative and evaluation services. MidAmerican regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process.

Value Proposition

Building owners participating in the program receive the following main benefits:

- Building owners receive trustworthy energy-savings recommendations from trained energy auditors.
- Building owners save money in the short term through rebates and financing and in the long term through lower utility bills.

- End-use customers (tenants) save instantly as a result of the direct install measures in each unit installed either during or shortly after the assessment.
- Building owners generally have a higher occupancy rate due to tenants with lower monthly energy bills. Apartments with low monthly energy costs are looked at favorably by prospective tenants. Existing tenants are more likely to stay in units with low energy costs.

Market Barriers

The table below presents the key market barriers to a successful multifamily program and strategies the program uses to address each barrier. Note these program strategies can only partially offset these barriers.

Market Barriers and Strategies

Market Barriers	Program Strategies
High incremental cost of efficient equipment	Offer rebates set at levels to help offset costs Offer support to obtain discounted financing Educate building owners regarding the benefits of higher efficiency equipment
Limited time and information to consider efficiency in emergency replacement	Conduct targeted dealer outreach and training Engage in ongoing dealer communications and education Implement low-hassle program requirements
Lack of building owner and dealer awareness	Educate building owners through program promotion/advertising Use traditional and nontraditional marketing approaches Engage in ongoing dealer communication, outreach and complete dealer sales training
Building owners don't trust energy-savings calculations	Provide case studies of actual projects with energy savings where appropriate
Split incentive, i.e., rental property owners own the building but the tenants pay the bills	Provide financial incentives for energy efficiency upgrades Provide free energy assessments Educate landlords about increasing property values and greater rent ability resulting from energy upgrades Focus on both individual units and common areas

Market Barriers	Program Strategies
Energy is a small part of overall operating costs	Target new purchases and equipment replacement markets Target marketing materials and education efforts
Large amount of variation in building types and configurations	Use different delivery models to match expertise and incentives to buildings Allow program manager flexibility in defining eligibility and delivery mechanisms
Building owners often choose to use their limited resources to make capital improvements to items seen by their tenants, such as paint, floor coverings, decorations, etc.	Educate the building owner on the importance of energy related capital improvements such as ENERGY STAR listed appliances, heating and cooling improvements and efficient lighting products

Incentives

MidAmerican offers the following financial incentives to participants:

- **No cost energy assessments** – No cost energy assessments are offered to assist participants in identifying how they use energy and what actions can be taken to reduce energy use.
- **Technical assistance** – Technical assistance is provided throughout the project cycle at no cost to participants. Assistance may include expert information regarding building shell and central heating/cooling plant-specific equipment, recommendations regarding energy-saving actions, estimates of energy-saving potential, general cost estimates for recommended actions, and trade ally identification.
- **Rebates** – Rebates are offered to help offset the cost to purchase and install energy efficient equipment. Rebates may be identical to prescriptive offerings under MidAmerican's Residential and Nonresidential Equipment programs. For some equipment types, the program may provide bonus rebates for multiple projects.

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

Detailed incentive levels for each measure offered in this program are provided in Appendix A.

New Construction/Renovation

For construction of new condominiums and apartments of three or less stories, the Residential New Construction program can provide incentives based on the energy saving strategies incorporated in the building. For renovation of existing buildings converted to apartments or condominiums, as well as construction of new multifamily housing facilities of four or more stories, MidAmerican's Commercial New Construction program can provide incentives based on the energy savings strategies chosen.

Marketing Plan

General Marketing Plan

MidAmerican will target multifamily building owners using traditional and non-traditional marketing channels, provide education and outreach to customers, trade allies and industry organizations, to encourage building owner participation and implementation of energy efficient measures and equipment. MidAmerican will focus on landlord associations by attending their trade shows, educational seminars and lunch and learn meetings to make them aware of the program offerings. Building owners have direct access to MidAmerican staff and/or their implementation contractors to answer questions.

MidAmerican will regularly review and update customer-facing program information and marketing materials as part of its internal program evaluation process, and adjusts materials as needed based on program adjustments and market characteristics.

Customer Targets

This program targets all multifamily housing building owners of four or more tenant-occupied residential apartments or condominiums. Townhomes and buildings with three or fewer residential living units are directed to MidAmerican's Residential Assessment program. To qualify for a multifamily housing assessment, the structure must be at least ten years old. Multifamily complexes serving low-income customers will be served by the multifamily component of the Low-Income program.

Customer eligibility requirements are outlined in the table below.

Customer Eligibility Parameters

	Electric Equipment	Natural Gas Equipment
Customer Class	Residential or nonresidential electric rate or a combination	Residential or nonresidential natural gas rate schedules Gas transportation tariff rate customers with daily metering are ineligible
Customer Status	Building owners; property managers; tenants	Building owners; property managers; tenants
Business Type	Multifamily housing (e.g. apartment buildings, condominiums, mixed-use)	Multifamily housing (e.g. apartment buildings, condominiums, mixed-use)
Geography	MidAmerican Iowa electric service territory	MidAmerican Iowa natural gas service territory
Size	Four or more residential living units	Four or more residential living units

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:

- Heating, ventilating and cooling dealers/contractors
- Water heating dealers/contractors
- Lighting dealers/contractors
- Building shell (insulation, efficient windows/doors) dealers/contractors
- Appliance dealers
- Large multifamily property owners
- Property management companies
- Homeowner associations of condominium style buildings

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. Further information regarding trade allies can be found in the Education program.

Promotion

MidAmerican will engage in a multifaceted promotional strategy, including:

- A dedicated brochure that outlines the program's features, benefits, eligibility requirements and financial incentives.
- Outreach and educational opportunities for trade allies, multifamily housing associations and support organizations.
- Attendance, material distribution, and presentations at multifamily housing events, trade shows and educational events across the state.
- Targeted advertisements in industry trade publications.
- Periodic articles in MidAmerican's monthly electronic newsletter as well as its quarterly newsletter that is sent with customer bills.
- A dedicated Web page that includes program information and qualification requirements and a program brochure.
- A reference to the energy efficiency website that will appear periodically on customer bills and in the electronic newsletter.
- A direct marketing campaign by multifamily housing specific segments with industry-specific information through direct mail, phone calls or emails to encourage participation. This includes face to face meetings with owners of large multifamily housing properties to promote the program.

Program referrals also are expected from trade allies. Information will be available on a dedicated portion of the energy efficiency website to assist trade allies in marketing and delivering energy-efficient products and services to customers, while encouraging participation in energy efficiency programs. The website offers trade allies the opportunity to order program materials, learn about program changes, and provide contact information for future communications. To keep trade allies informed and engaged with the program, MidAmerican will periodically provide program information and training via a variety of different communication modes to create overarching energy efficiency and program awareness among our customers and trade allies. MidAmerican's Trade Ally Central website provides additional resources for trade ally engagement.

MidAmerican Energy Company
Iowa Energy Efficiency Plan 2014-2018
Agriculture Program

Description of Program

The Agriculture program provides services and incentives to serve the specific needs of the agricultural sector to help customers improve the overall energy efficiency of their facilities and reduce their operating costs. The program provides comprehensive on-site energy assessments to identify areas of high energy use, recommend energy-savings opportunities, and provide information on available incentives. A comprehensive assessment report includes recommendations for farm-industry buildings and operations. The program promotes the purchase of high-efficiency equipment by agricultural customers through prescriptive and custom incentives.

The on-site assessment is available to agribusiness customers that receive electricity and/or natural gas supplied directly from MidAmerican.

Transportation gas customers with daily metering are ineligible for gas measures. However, customers with monthly metering under the Monthly Metered Transportation Service gas tariff are eligible for energy efficiency incentives.

Measure List

The Agriculture program provides rebates and incentives for the following measures:

Direct Install Measures

- Compact fluorescent lamps – exterior

Any prescriptive or cost effective custom energy efficiency measure is potentially eligible for rebate under the Agriculture program. Typical measures include:

- Variable speed drives
- T-8 and T-5 fluorescent high bay lighting systems
- Occupancy sensors
- Pulse start metal halide fixtures

Information on savings, incentives, incremental costs, and other qualifying information for all measures in this program is provided in Appendix A.

MidAmerican performs an annual review of qualifying equipment and may adjust direct install measures, follow-up measures and eligibility levels in the future as market conditions and equipment standards change.

Budgets

Anticipated five-year spending for the Agriculture program is as follows:

Residential Budgets

Electric Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 24,327	$ 40,449	$ 64,776
2015	$ 24,935	$ 40,825	$ 65,760
2016	$ 25,558	$ 41,211	$ 66,769
2017	$ 26,197	$ 41,607	$ 67,804
2018	$ 26,852	$ 42,012	$ 68,864
Total	$ 127,869	$ 206,104	$ 333,973

Gas Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 2,703	$ 2,946	$ 5,649
2015	$ 2,771	$ 2,987	$ 5,758
2016	$ 2,840	$ 3,029	$ 5,869
2017	$ 2,911	$ 3,073	$ 5,984
2018	$ 2,984	$ 3,117	$ 6,101
Total	$ 14,209	$ 15,151	$ 29,360

Total Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 27,030	$ 43,394	$ 70,424
2015	$ 27,706	$ 43,812	$ 71,518
2016	$ 28,398	$ 44,240	$ 72,638
2017	$ 29,108	$ 44,679	$ 73,787
2018	$ 29,836	$ 45,129	$ 74,965
Total	$ 142,078	$ 221,256	$ 363,334

Nonresidential Budgets

Electric Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 49,817	$ 36,782	$ 86,599
2015	$ 51,062	$ 37,291	$ 88,353
2016	$ 52,339	$ 37,813	$ 90,152
2017	$ 53,647	$ 38,348	$ 91,995
2018	$ 54,988	$ 38,896	$ 93,884
Total	$ 261,853	$ 189,130	$ 450,983

Gas Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 5,535	$ 40,550	$ 46,085
2015	$ 5,673	$ 41,035	$ 46,708
2016	$ 5,815	$ 41,533	$ 47,348
2017	$ 5,960	$ 42,043	$ 48,003
2018	$ 6,109	$ 42,566	$ 48,675
Total	$ 29,092	$ 207,728	$ 236,820

Total Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 55,352	$ 77,332	$ 132,684
2015	$ 56,735	$ 78,326	$ 135,061
2016	$ 58,154	$ 79,346	$ 137,500
2017	$ 59,607	$ 80,391	$ 139,998
2018	$ 61,097	$ 81,463	$ 142,560
Total	$ 290,945	$ 396,858	$ 687,803

Detailed budgets by spending category and staffing assumptions in FTEs for this program are provided in Appendix B.

Energy Savings

Anticipated savings levels for the Agriculture program are as follows:

Residential Savings

Electric Savings	Annual kWh	Peak kW
2014	156,352	19
2015	156,352	19
2016	152,930	18
2017	152,930	18
2018	152,930	18
Total	771,493	92

Gas Savings	Annual Therms	Peak Therms
2014	1,100	14
2015	1,100	14
2016	1,100	14
2017	1,100	14
2018	1,100	14
Total	5,500	72

Nonresidential Savings

Electric Savings	Annual kWh	Peak kW
2014	183,487	28
2015	183,487	28
2016	167,659	25
2017	167,659	25
2018	167,659	25
Total	869,951	131

Gas Savings	Annual Therms	Peak Therms
2014	6,500	-
2015	6,500	-
2016	6,500	-
2017	6,500	-
2018	6,500	-
Total	32,500	-

Participation

Participation estimates for each measure offered in this program are provided in Appendix C.

Cost Effectiveness

Anticipated total net economic benefits of the program are as follows:

Residential Cost Effectiveness

Program	Electric	Gas	Total
Program Benefits	$ 634,246	$ 77,624	$ 711,870
Program Costs	$ 420,411	$ 45,669	$ 466,080
Net Economic Benefits	$ 213,835	$ 31,955	$ 245,790
Societal Test Ratio	1.51	1.70	1.53

Nonresidential Cost Effectiveness

Program	Electric	Gas	Total
Program Benefits	$ 670,594	$ 594,880	$ 1,265,473
Program Costs	$ 482,529	$ 363,589	$ 846,118
Net Economic Benefits	$ 188,065	$ 231,290	$ 419,355
Societal Test Ratio	1.39	1.64	1.50

Operations

Description of Operations

MidAmerican provides free on-site energy assessments to requesting agribusiness customers. Energy assessments are performed by a program contractor with expertise in building envelope, energy-using equipment, and specialized farm equipment. Recommendations and energy efficiency program information are provided to assist customers in completing projects and obtaining available prescriptive and custom incentives.

Key steps in program participation include:

- **On-site assessment scheduling** – The customer calls the program contractor to schedule an assessment, or is transferred by MidAmerican. The customer also may submit an online form to receive a call to schedule an assessment.
- **On-site assessment completion** – The program contractor performs a walkthrough energy assessment to visually inspect energy-using equipment, informs customers of ways to

operate building energy systems more efficiently, reviews energy usage and cost patterns found in historic energy bills, evaluates eligibility for financial incentives for additional measures, and provides contact information as well as information regarding how to participate in MidAmerican's other energy efficiency programs.

- **Assessment report** – The program contractor provides the agribusiness owner an assessment report that includes recommendations for energy efficiency projects appropriate for agribusiness customers. The report also provides website addresses to easily access additional rebate information and application forms. During program design, appropriate timelines for report delivery will be established to ensure adequate analysis and timeliness to the customer.
- **Rebate application** – When a customer completes a prescriptive or custom project as a result of their assessment, they submit an application form for review and processing.
- **Rebate processing and database maintenance** – The program contractor and MidAmerican process rebates and maintain the database for tracking and reporting purposes.
- **Verification** – The program contractor conducts verification on a sample of measure installations.

Description of Outside Services

MidAmerican staff provides overall strategic direction for the program, conducts research and development, and provides promotion, trade ally support, evaluation and other administrative functions.

MidAmerican uses two program contractors to help deliver the program. One contractor handles program enrollment and data tracking, and works directly with customers to conduct the on-site energy assessments. The other contractor handles associated rebate processing for recommended measures that are installed following an assessment.

MidAmerican currently contracts with Franklin Energy Services LLC and A-TEC Energy Corporation for administrative and evaluation services. MidAmerican regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process.

Value Proposition

Customers participating in the program receive three main benefits:

- Financial benefits in the form of the free energy assessment, rebates that reduce the payback of implemented energy efficiency measures, energy savings for the lifetime of the installed measures, and potentially increased property values.
- Confidence in investment decision due to trustworthy energy-savings recommendations from trained energy auditors.
- Potential increase in customer product capacity and profits from installing equipment upgrades.

Market Barriers

The table below presents the key market barriers to a successful agriculture program and the strategies the program uses to address each barrier. Note these program strategies can only partially offset these barriers.

Market Barriers and Strategies

Market Barriers	Program Strategies
High incremental cost of efficient equipment	Offer rebates set at levels to help offset costs Offer support to obtain discounted financing Educate consumers regarding the benefits of higher efficiency equipment
Limited time and information to consider efficiency in emergency replacement	Conduct targeted dealer outreach and training Engage in ongoing dealer communications and education Implement low-hassle program requirements
Lack of customer and dealer awareness	Educate customers through program promotion/advertising Use traditional and nontraditional marketing approaches Engage in ongoing dealer communication, outreach and complete dealer sales training
Customers don't trust energy-savings calculations	Provide case studies of actual projects with energy savings where appropriate
Disruptions to business due to seasonal business cycle	Focus installation efforts during off-season periods
Energy is a small part of overall operating costs	Target new purchases and equipment replacement markets Targeted marketing materials and education efforts
Agriculture sector equipment is highly industrial and site-specific and does not readily fit into prescriptive rebate programs	Offer a combination of prescriptive and custom incentives Support leveraging additional funds through the Farm Bill and other programs
Agricultural equipment may be used heavily during short time periods (e.g., during harvest) and therefore does not always fit into incremental cost versus savings eligibility criteria	Offer a combination of prescriptive and custom incentives Support leveraging additional funds through the Farm Bill and other programs

Incentives

MidAmerican offers the following financial incentives to participants:

- **No cost energy assessments** – No cost energy assessments are offered to assist participants in identifying how they use energy and what actions can be taken to reduce energy use.
- **Technical assistance** – Technical assistance is provided throughout the project cycle at no cost to participants. Assistance may include expert information regarding building shell and agriculture-specific equipment, recommendations regarding energy-saving actions, estimates of energy-saving potential, general cost estimates for recommended actions, and trade ally identification.
- **Equipment incentives** – Prescriptive rebates, as outlined in the Residential and Nonresidential Equipment programs, will apply to projects in the Agriculture program. However, much of the equipment specific to the agriculture industry will undergo a custom analysis to determine incentives. Custom rebates are set at 25 percent of incremental cost or an amount that buys down the project to 25 percent of its useful life, whichever is greater. Incentives will be capped at a one year simple payback.
- **Enhanced incentives** – Enhanced incentives will be offered to encourage multiple projects.

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

Detailed incentive levels for each measure offered in this program are provided in Appendix A.

Marketing Plan

General Marketing Plan

MidAmerican will target agriculture sector customers using traditional and non-traditional marketing channels, provide education and outreach to customers, trade allies and industry organizations, to encourage customer participation and implementation of energy efficient measures and equipment.

MidAmerican will regularly review and update customer-facing program information and marketing materials as part of its internal program evaluation process, and adjust materials as needed based on program adjustments and market characteristics.

Customer Targets

This program targets all agricultural sector customers, including grain, dairy, livestock and specialty industries (such as grain elevators). Since customers' farm operations buildings may be on residential and/or nonresidential tariffs, program costs and rebates will be appropriately assigned and allocated to the residential and nonresidential program components.

The table below outlines customer eligibility requirements.

Customer Eligibility Parameters

	Electric Equipment	Natural Gas Equipment
Customer Class	Farms on residential and nonresidential electric rate schedules	Farms on residential and nonresidential natural gas rate schedules Gas transportation tariff rate customers with daily metering are ineligible
Customer Status	Customer building or business owners	Customer building or business owners
Business Type	Grain, dairy, livestock and specialty farms (such as grain elevators)	Grain, dairy, livestock and specialty farms (such as grain elevators)
Geography	MidAmerican Iowa electric territory	MidAmerican Iowa natural gas territory
Size	No customer size limitations	No customer size limitations

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:

- Specialized farm equipment dealers
- Specialized farm developers/contractors
- Lighting dealers
- Motor and variable-speed drive (VSD) dealers
- HVAC contractors
- Grant writers

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. Further information regarding trade allies can be found in the Education program.

Promotion

MidAmerican will engage in a multifaceted promotional strategy, including:

- Outreach and educational opportunities for trade allies, agriculture industry associations and support organizations.
- Attendance, material distribution, and presentations at industry events such as state and county fairs, farm shows, and other industry events.
- Participation in agriculture industry associations and industry support organizations.
- Targeted advertisements in industry trade publications.
- Periodic articles in MidAmerican's monthly electronic newsletter as well as its quarterly newsletter that is sent with customer bills.
- A dedicated Web page that includes program information and qualification requirements and a program brochure.
- A reference to the energy efficiency website will appear periodically on customer bills and in the electronic newsletter.
- A direct marketing campaign by targeting specific agriculture segments with industry-specific information through direct mail, phone calls or emails to encourage participation.

Program referrals also are expected from trade allies. Information will be available on a dedicated portion of the energy efficiency website to assist trade allies in marketing and delivering energy-efficient products and services to customers, while encouraging participation in energy efficiency programs. The website offers trade allies the opportunity to order program materials, learn about program changes, and provide contact information for future communications. To keep trade allies informed and engaged with the program, MidAmerican will periodically provide program information and training via a variety of different communication modes to create overarching energy efficiency and program awareness among our customers and trade allies. MidAmerican's Trade Ally Central website provides additional resources for trade ally engagement.

MidAmerican Energy Company
Iowa Energy Efficiency Plan 2014-2018
Education Program

Description of Program

The Education program promotes energy efficiency education through activities organized into four general areas: training, school curricula, awareness and trade ally support.

Training

In this area, MidAmerican sponsors or provides training programs for customers and trade allies to increase their knowledge of specific energy efficiency areas and systems. Participants in these training programs may receive certification to document participation. MidAmerican will work to increase available training opportunities by sponsoring and promoting training programs that are delivered by third-party providers. MidAmerican also will offer some training programs in coordination with other utilities. Examples of training programs MidAmerican has offered in the past are found below.

- HVAC System Adjustment & Verified Efficiency (SAVE) training has been offered to HVAC contractors based on National Comfort Institute curricula in cooperation with other Iowa utilities, the Iowa Energy Center and the Midwest Energy Efficiency Alliance.
- The Department of Energy's Compressed Air Challenge training program has been offered in cooperation with members of the Partnership for Industrial Energy Efficiency (PIE^2).
- Steam system training has been offered in cooperation with PIE^2.
- MidAmerican has offered a Motors Systems Management seminar which offered training on motors and variable speed drives.
- MidAmerican has offered a LED lighting seminar targeted to municipal and nonresidential customers.
- Building Operator Certification (BOC) training has been offered to customers in cooperation with the other Iowa utilities and the Midwest Energy Efficiency Alliance.

In this energy efficiency plan, MidAmerican will:

- Expand its training offerings by identifying and developing new programs to target additional customer and trade ally segments.
- Increase direct outreach to business associations to better identify training and educational opportunities that would benefit their membership groups.
- Identify areas where training can help improve the performance of energy efficiency programs.
- Indentify new areas where training can help customers save energy and money.

School Curriculum

With these activities, MidAmerican works with schools to integrate energy efficiency education into curriculum and extracurricular activities. In the past, MidAmerican has offered a curriculum called *e-SMARTkids* to elementary and some middle school teachers throughout its service territory. MidAmerican will continue to offer *e-SMARTkids* on its website and provide five different energy

efficiency curriculum booklets along with comprehensive teacher's guides to schools in its Iowa service territory.

Additionally, MidAmerican will continue its partnership with the Science Center of Iowa to bring *Simply Electrifying* assembly programs to elementary students in MidAmerican's Iowa service territory on a four-year cycle. *Simply Electrifying* reinforces National Science Standards and provides electric safety and energy efficiency information to students.

MidAmerican will look for opportunities to support energy efficiency education in other grade levels and in higher education, including science fair projects, school contests and similar activities. MidAmerican will investigate the feasibility of offering additional curriculum materials for grades 7 through 9.

Awareness

In this area, MidAmerican engages in a number of activities to increase awareness of energy efficiency in general and in the Company's programs in particular. Current offerings in this area include:

- Mass media advertising featuring MidAmerican's "*Power in your hands"* campaign.
- MidAmerican's energy efficiency website.
- Outreach at events such as the Iowa State Fair, community events, home and trade shows.
- Sponsorship partnerships such as university, college and professional sports.
- Customer support through MidAmerican's key account managers and the BusinessAdvantage® call center.
- MidAmerican's trade ally outreach program, described below.

In this energy efficiency plan, MidAmerican will expand its awareness offerings by:

- Updating its energy efficiency website.
- Updating its mass media campaign.
- Sponsoring presentations and demonstrations to employees of key account customers and in town hall meetings, community group presentations and other venues.
- Increasing direct outreach to communities, neighborhood associations and individuals.
- Participating in local energy education events.
- Leveraging educational opportunities available through MidAmerican's existing energy efficiency programs.

Trade Ally Support

In this area, MidAmerican engages in a number of activities designed to keep trade allies fully informed of program design changes, encourage trade allies to promote MidAmerican's energy efficiency programs and recognize outstanding trade ally performance. MidAmerican currently offers a wide range of support services to its trade allies, including formal and informal training, personal communication through in-person meetings, focus groups, phone calls and email blasts, and advertising support.

In this energy efficiency plan, MidAmerican will expand its trade ally support offerings by:

- Increasing resources for trade ally training and education.
- Creating new Web-based tools to facilitate program participation by trade allies' customers.
- Increasing Web-based efforts to promote qualified trade allies to MidAmerican's customers by providing information regarding which trade allies have successfully completed similar projects.
- Increasing resources to keep trade allies informed about MidAmerican's program activities and encourage participation.

In addition to these areas of energy education, MidAmerican also supports the Iowa Energy Center and the Iowa Center for Global and Regional Environmental Research through its annual remittances to these organizations. These organizations provide additional energy education to MidAmerican customers and trade allies.

Measure List

- There are no measures that receive rebates or incentives in this program.

Budgets

Anticipated five-year spending for the Education program is as follows:

Residential Budgets

Electric Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 1,050,184	$ -	$ 1,050,184
2015	$ 1,076,439	$ -	$ 1,076,439
2016	$ 1,103,350	$ -	$ 1,103,350
2017	$ 1,130,934	$ -	$ 1,130,934
2018	$ 1,159,207	$ -	$ 1,159,207
Total	$ 5,520,114	$ -	$ 5,520,114

Gas Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 1,270,839	$ -	$ 1,270,839
2015	$ 1,302,610	$ -	$ 1,302,610
2016	$ 1,335,175	$ -	$ 1,335,175
2017	$ 1,368,554	$ -	$ 1,368,554
2018	$ 1,402,768	$ -	$ 1,402,768
Total	$ 6,679,946	$ -	$ 6,679,946

Total Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 2,321,023	$ -	$ 2,321,023
2015	$ 2,379,049	$ -	$ 2,379,049
2016	$ 2,438,525	$ -	$ 2,438,525
2017	$ 2,499,488	$ -	$ 2,499,488
2018	$ 2,561,975	$ -	$ 2,561,975
Total	$ 12,200,060	$ -	$ 12,200,060

Nonresidential Budgets

Electric Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 1,587,444	$ -	$ 1,587,444
2015	$ 1,627,130	$ -	$ 1,627,130
2016	$ 1,667,808	$ -	$ 1,667,808
2017	$ 1,709,503	$ -	$ 1,709,503
2018	$ 1,752,241	$ -	$ 1,752,241
Total	$ 8,344,126	$ -	$ 8,344,126

Gas Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 455,632	$ -	$ 455,632
2015	$ 467,023	$ -	$ 467,023
2016	$ 478,699	$ -	$ 478,699
2017	$ 490,666	$ -	$ 490,666
2018	$ 502,933	$ -	$ 502,933
Total	$ 2,394,953	$ -	$ 2,394,953

Total Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 2,043,076	$ -	$ 2,043,076
2015	$ 2,094,153	$ -	$ 2,094,153
2016	$ 2,146,507	$ -	$ 2,146,507
2017	$ 2,200,169	$ -	$ 2,200,169
2018	$ 2,255,174	$ -	$ 2,255,174
Total	$ 10,739,079	$ -	$ 10,739,079

Detailed budgets by spending category and staffing assumptions in FTEs for this program are provided in Appendix B.

Energy Savings

There are no gas or electric savings associated with this program.

Participation

Participation estimates for each measure offered in this program are provided in Appendix C.

Cost Effectiveness

Anticipated total net economic benefits of the program are as follows:

Residential Cost Effectiveness

Program	Electric	Gas	Total
Program Benefits	$ -	$ -	$ -
Program Costs	$ 5,261,188	$ 6,366,616	$ 11,627,804
Net Economic Benefits	$ (5,261,188)	$ (6,366,616)	$ (11,627,804)
Societal Test Ratio	-	-	-

Nonresidential Cost Effectiveness

Program	Electric	Gas	Total
Program Benefits	$ -	$ -	$ -
Program Costs	$ 7,952,736	$ 2,282,615	$ 10,235,352
Net Economic Benefits	$ (7,952,736)	$ (2,282,615)	$ (10,235,352)
Societal Test Ratio	-	-	-

Operations

Description of Operations

Each component employs a slightly different implementation strategy, as follows:

Training

In this area, MidAmerican sponsors training programs for customers and trade allies. Where appropriate, MidAmerican subsidizes registration fees for participating customers and trade allies. Key steps in program operations include:

- **Identify programs** – Identifying training programs appropriate to MidAmerican's customers and trade allies.
- **Identify instructors** – Identifying qualified instructors available to offer training in MidAmerican's service territory.
- **Determine locations** – Arranging venues with adequate space and other resources necessary to hold training sessions.
- **Coordinate offerings** – Coordinating offerings with other state and regional utilities, when appropriate.
- **Promote programs** – Developing and implementing marketing strategies appropriate to each training program.
- **Evaluate programs** – Evaluating program effectiveness.

School Curriculum

In this area, MidAmerican provides curriculum and other activities for use by schools. Key steps in program operations include:

- **Identify curriculum** – Identifying curriculum and other educational activities appropriate to MidAmerican's service territory.
- **Develop strategies** – Developing and implementing marketing and communications strategies appropriate to each activity.
- **Educator outreach** – Contacting teachers and administration officials to make them aware of the offerings.
- **Curriculum fulfillment** – Fulfilling orders for materials from schools.
- **Assembly fulfillment** – Delivering activities through schools in MidAmerican's service area.
- **Evaluate programs** – Evaluating the effectiveness of each activity.

Awareness

In this area, MidAmerican undertakes a number of activities to increase energy efficiency awareness among customers and trade allies. Awareness and outreach can include a broad range of activities including advertising. Program operation steps may vary by activity. Key steps in program operations may include:

- **Planning** – Planning for awareness activities such as participation in events, advertising campaigns, presentations and other activities.
- **Coordinating** – Coordinating activities with partners and contractors.
- **Develop materials** – Developing materials such as media publications, brochures and other materials.
- **Purchase media time** – Purchasing media time for venues such as television, radio, newspapers, magazines, Internet and outdoor signage.
- **Implement strategies** – Developing and implementing marketing strategies appropriate to each activity.
- **Evaluate activities** – Evaluating the effectiveness of each activity.

Trade Ally Support

In this area, MidAmerican undertakes a number of activities to support trade allies. Key steps in area program operations vary by activity, but generally include:

- **Develop communications channels** – Identifying and developing new communication channels, meetings and events, advertising support and other activities.
- **Improve website** – Improving the functionality of Trade Ally Central, MidAmerican's website for trade allies.
- **Trade ally outreach** – Outreach to and communication with trade allies.
- **Coordinate activities** – Coordinating activities with partners and contractors.
- **Implement strategies** – Developing and implementing marketing strategies appropriate to each activity.
- **Evaluate activities** – Evaluating the effectiveness of each activity.

Description of Outside Services

The Company currently contracts with Flynn Wright for advertising and awareness services, A-TEC Energy Corp. for Trade Ally support and Culver Company, LLC and Science Center of Iowa for curriculum development services. Additional contractors may be selected as the need arises. MidAmerican regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process.

Value Proposition

While benefits vary by program area, participants receive the following primary benefits:

- Participants expand energy efficiency knowledge through job- and interest-related trainings, increasing employment skills and promoting economic development.
- Participants invest in future generations by promoting energy efficiency education in schools and increasing opportunities for children to live in a clean and healthy environment.

- Participants receive energy savings and quality services by incorporating energy-saving behaviors into their everyday lives and by using the education programs as a stepping stone toward MidAmerican's other energy efficiency programs.
- Customers receive information to help them choose a qualified contractor to help them improve the energy efficiency of their homes.

Market Barriers

The table below presents the key market barriers to a successful education program and strategies to address each barrier. Note program strategies can only partially offset the identified barriers.

Market Barriers and Strategies

Market Barriers	Program Strategies
Lack of customer awareness of educational opportunities	Outreach through traditional and non-traditional mechanisms Create a comprehensive marketing strategy and develop new outlets for awareness activities
Lack of time and resources to participate	Provide full or partial subsidies for educational opportunities Provide flexible scheduling Streamline programs to ensure efficient use of participants' time
Lack of profitability for education providers attempting to develop programs for local market	Leverage programs and curricula created by national organizations

Incentives

The incentive strategy is to overcome the financial barriers facing customers and trade allies using the following types of incentives:

- **Full subsidies** – MidAmerican will continue to offer school curricula and some training programs free of charge. For these activities, MidAmerican covers the full cost to program contractors for the coordination, promotion, development and implementation of educational events.
- **Partial subsidies** – For some professional-level training classes, MidAmerican will offer partial subsidies to cover approximately half of the cost to attend. In general, MidAmerican will process subsidies through payments to instructors and schools rather than through rebate checks to participants.
- **General awareness** – MidAmerican will continue to offer awareness activities free of charge to customers and trade allies.

Marketing Plan

General Marketing Plan

MidAmerican's education program will be available to all customers and trade allies throughout the Company's Iowa service territory. Training targets energy professionals, trade allies and interested homeowners and businesses. Curriculum targets teachers, administrators and students. MidAmerican's awareness activities are targeted to all customers and trade allies.

Customer Targets

Customer targets include all residential and nonresidential customers. Customer eligibility requirements are outlined below.

Customer Eligibility Parameters

	Electric Customers	Natural Gas Customers
Customer Class	All residential and nonresidential electric rate schedules	All residential and nonresidential natural gas rate schedules
Customer Status	No restrictions	No restrictions
Business Type	No restrictions	No restrictions
Geography	MidAmerican Iowa electric territory	MidAmerican Iowa natural gas territory
Size	No customer size limitations	No customer size limitations

Trade Ally Targets

Trade allies targeted by this program include the educators responsible for delivering the training and curriculum activities as well as groups such as the Iowa Energy Center and the Midwest Energy Efficiency Alliance, who help to coordinate activities among Iowa's utilities. Moreover, MidAmerican's entire trade ally network helps to deliver MidAmerican's program awareness activities. To support its trade allies and keep them informed of program opportunities and changes, MidAmerican will maintain an active trade ally outreach program. Key components of the program include the following:

- **Ongoing communication** – MidAmerican reaches out to existing and potential trade allies through personal communication led by the trade ally outreach contractor, website and mailing lists, email blasts, periodic events and in-person meetings, program presentations at trade ally meetings, lunch-and-learn events, expos and community events.
- **Marketing support** – MidAmerican promotes its trade allies through advertising in trade ally journals, sponsoring trade ally events, highlighting trade allies' projects in case studies and on its website, trade ally Web links and online information and listings in MidAmerican's trade ally database.
- **Recognition** – MidAmerican's Trade Ally Central website is being improved to recognize its trade allies in terms of quality installation, program participation and other areas. In addition, MidAmerican will highlight exceptional trade ally projects on its website and in

case studies that are made available to customers. Customers will be able to access information about trade allies to help them select potential contractors for energy efficiency projects.

Promotion

Each of the program areas will be promoted through an appropriate marketing strategy that may include brochures, newspapers, magazines, TV, radio, Internet, outdoor signage, direct mail, bill inserts and one-on-one communication. Information on each activity will be available on MidAmerican's website and will be supported by MidAmerican's general awareness advertising.

MidAmerican Energy Company
Iowa Energy Efficiency Plan 2014-2018
Trees Program

Description of Program

The Trees program promotes tree planting through four different program components. Each component provides grants or other financial incentives as well as educational materials targeting a different customer segment. Due to the success during the duration of its pilot, the Trees for E-bill program component will be included in this Plan.

Track I – Plant Some Shade

In this component, residential customers may order up to two trees at a low cost, subsidized by MidAmerican funding. The trees are distributed to customers at a number of one-day pickup events. Each customer also is given information on the benefits and care of trees best suited to Iowa's environment. This component is delivered in conjunction with the Iowa Department of Natural Resources (IDNR).

Track II – Trees Please!

In this component, MidAmerican provides annual grants for community tree-planting projects. Any city or town in MidAmerican's service territory may submit a grant request annually for tree-planting projects in common areas such as parks and city-owned properties. Communities may receive enhanced grants for special projects or to recover from a natural disaster.

Track III – Trees for Kids/Trees for Teens

In this component, MidAmerican funds and hosts tree-planting events at local schools or parks. Trees for Kids/Trees for Teens is a tree education and planting program for elementary and secondary schools across the state of Iowa. The program's mission is to promote the value of trees to Iowa's youth by providing educational information and opportunities for tree planting and care.

Track IV – Trees for E-bill

In this component, MidAmerican donates a dollar for tree planting for every customer that signs up for electronic billing through e-mail manager and eCSS. Each spring trees are planted by Living Land and Waters with volunteer labor.

The Trees program is available to all Iowa residential customers through the Plant Some Shade component, available to Iowa Cities thru our Trees Please! component and available to schools through the Trees for Kids/Trees for Teens component.

Measure List

The Trees program provides rebates and incentives for the following measures:

- Plant Some Shade
- Trees Please!
- Trees for Kids/Teens
- Trees for E-bill

Information on savings, incentives, incremental costs, and other qualifying information for all measures in this program is provided in Appendix A.

Budgets

Anticipated five-year spending for the Trees program is as follows:

Electric Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 283,300	$ -	$ 283,300
2015	$ 278,750	$ -	$ 278,750
2016	$ 284,800	$ -	$ 284,800
2017	$ 291,350	$ -	$ 291,350
2018	$ 298,500	$ -	$ 298,500
Total	$ 1,436,700	$ -	$ 1,436,700

Gas Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 283,300	$ -	$ 283,300
2015	$ 278,750	$ -	$ 278,750
2016	$ 284,800	$ -	$ 284,800
2017	$ 291,350	$ -	$ 291,350
2018	$ 298,500	$ -	$ 298,500
Total	$ 1,436,700	$ -	$ 1,436,700

Total Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 566,600	$ -	$ 566,600
2015	$ 557,500	$ -	$ 557,500
2016	$ 569,600	$ -	$ 569,600
2017	$ 582,700	$ -	$ 582,700
2018	$ 597,000	$ -	$ 597,000
Total	$ 2,873,400	$ -	$ 2,873,400

Detailed budgets by spending category and staffing assumptions in FTEs for this program are provided in Appendix B.

Energy Savings

There are no gas or electric savings associated with this program.

Participation

Participation estimates for each measure offered in this program are provided in Appendix C.

Cost Effectiveness

Pursuant to Board Rule 35.8(2) "a" tree-planting programs shall not be tested for cost-effectiveness unless the utility wishes to present the results of cost-effectiveness tests for informational purposes. At this time, MidAmerican has not tested its tree-planting programs for cost-effectiveness and does not have any results to present for informational purposes.

Operations

Description of Operations

The program uses distinct processes for each of the tracks, which are detailed below.

Track I – Plant Some Shade

This component is coordinated by the IDNR. Key steps in this component include:

- **Tree order processing** – Customer phone or online orders for trees are processed.
- **Inventory acquisition** – Work with local nurseries to ensure enough quality trees are supplied to satisfy customer orders.
- **Information development** – Information is developed on the benefits of planting trees, the varieties of trees best suited to Iowa's environment, and how to plant, protect and care for trees.
- **Pick-up event** – A number of customer pick-up events are organized and conducted.

Track II – Trees Please!

This program is delivered and implemented directly by MidAmerican staff. Key steps in this component include:

- **Grant packages** – Grant packages are distributed to city administrators and community leaders each fall, including educational materials, detailed instructions on program operation and participation and a grant application.
- **Grant application review and processing** – Grant applications are reviewed and processed (if qualified) for city- or town-sponsored projects in community spaces, such as parks, schools, road right of ways or other public property.
- **Check delivery** – Checks are delivered to recipients.
- **Recipient reporting** – Recipients submit a report to MidAmerican detailing project progress and plans for completion. Recipients failing to submit a report are not eligible for future grant funding. Recipients typically must spend the total grant on the cost of the trees before they apply for another grant.

Track III – Trees for Kids/Teens

This component is coordinated by the IDNR. Key steps in this component include:

- **Information delivery** – Information and applications are sent to school administrators and teachers in MidAmerican's service territory each year.
- **Application review** – Applications for financial support to host events are reviewed and approved.
- **Tree planting event** – Organize and conduct a number of one-day tree planting events.
- **Funding request processing** – Funding requests for trees are processed.
- **Educational materials** – Age-appropriate educational materials are distributed on trees during events.

In addition to these program components, MidAmerican works with local nursery associations, conservation groups and state organizations to distribute a comprehensive resource booklet on the benefits of planting trees, the varieties of trees best suited to Iowa's environment and how to plant, prune, protect and care for trees. These booklets are distributed through community events, local nurseries, the Residential Assessments program and the call center.

Track IV – Trees for E-bill

In this component, MidAmerican donates a dollar for every customer that signs up for electronic billing through e-mail manager and eCSS. Each spring, trees are purchased and planted by Living Land and Waters using volunteer labor.

Description of Outside Services

Track I & Track III – Plant Some Shade & Trees for Kids/Trees for Teens: The IDNR is the primary program contractor, providing promotion, local coordination and delivery for the Plant Some Shade and Trees for Kids/Trees for Teens components. The IDNR works with local conservation organizations to provide on-the-ground organization of events, and with nurseries around the state to supply trees for these two components. The IDNR provides reports to MidAmerican on the Plant Some Shade and Trees for Kids/Trees for Teens components providing updates on program participation.

Track IV – Trees for E-bill: Living Lands and Waters is the contractor for Trees for E-bill program. They purchase the trees and organize the spring tree planting events.

Value Proposition

Customers receive the following benefits:

Financial benefits in the form of:

- Low cost trees to beautify their homes.
- Grants to help to beautify town or city parks, walking trails and public property and street spaces.
- Increased property values due to landscaping with trees.

Environmental benefits:

- Planting trees improves air quality, provides shade to reduce summer cooling energy, absorbs carbon dioxide and helps to protect the soil.

Confidence:

- Customers can count on getting trees each year. Each of the components provides a consistent, known quantity of trees or grant amounts through a simple order or application process. Cities can plan for their grants in organizing community beautification projects each year.

Market Barriers

The table below presents the key market barriers to an effective tree-planting program and strategies the program uses to address each barrier. Note these program strategies can only partially offset the barriers.

Market Barriers and Strategies

Market Barriers	Program Strategies
Lack of customer awareness of program	One-on-one outreach through green space conferences and local events Conduct market research to identify towns that do not participate in Trees Please! program and send program information Work with local conservation organizations, cities and extension agents to increase local marketing through newsletters, websites and events
Lack of customer awareness of proper tree selection and planting practices	Provide information on proper tree planting and care
Lack of adequate supply to meet demand	Coordinate with IDNR to ensure enough trees are ordered to meet demand Reach out to new nurseries to provide trees for program

Incentives

MidAmerican offers the following financial incentives to participants:

Track I – Plant Some Shade

- **Reduced cost** – The financial incentive for this program is a buy down of the cost of trees to $35 per tree. Customers are limited to two trees per event.

Track II – Trees Please!

- **Grants** – The financial incentive for this component includes block grants distributed in standardized amounts for most cities, with a few special projects receiving larger grants. Cities or towns applying for grant funds must provide 50 percent cost-sharing, either in cash or through in-kind services.

Track III – Trees for Kids/Trees for Teens

- **Trees provided at no cost** – The financial incentive is 100 percent of the tree costs are paid by MidAmerican.
- **Educational materials** – MidAmerican provides age-appropriate educational materials on trees.
- **Refreshments and free labor** – MidAmerican may sponsor refreshments and provide volunteer labor for school planting events.

Track IV – Trees for E-bill

- **Donations** – The financial incentive is $1 per customer signed up for E-bill to fund tree planting.

Marketing Plan

General Marketing Plan

Plant Some Shade and Trees for Kids/Trees for Teens components are coordinated through the IDNR with a variety of promotional support is provided by local conservation organizations. The Plant Some Shade component is promoted primarily through local newspaper advertisements in cities and towns where events take place, as well as on MidAmerican's website and is supported by MidAmerican's general awareness advertising.

The Trees Please! And the Trees for Kids/Trees for Teens components are promoted through annual direct mailings to community leaders and schools that include program information and grant application packages for the Trees Please! component. MidAmerican will work to increase participation in Trees Please! by attending conferences targeted to city governments and by researching cities and towns that may not already be included in the program database for mailings. Community tree-planting events also are promoted through press releases to local newspapers.

Brochures also are provided to local nurseries, environmental organizations and extension agencies as well as to customers at local events. MidAmerican will work with the IDNR and local coordinators to increase promotion of this program through partner websites, newsletters and broader distribution of information.

The Trees for E-bill is component is promoted through customer call center employees and through Web sign-ups.

Customer Targets

The Trees Please! component targets all of the communities in MidAmerican's Iowa service territory. Community organizations also may apply for Trees Please! funding, although each grant must be sponsored by a municipality. The Plant Some Shade component targets homeowners in all large and medium-sized cities and towns and in a rotating list of smaller towns each year. The Trees for Kids/Trees for Teens component targets school teachers and administrators. The Trees for E-bill targets all of MidAmerican energy customers that are considering electronic bill pay.

The table below outlines customer eligibility requirements.

Customer Eligibility Parameters

	Plant Some Shade	Trees Please!	Trees for Kid/Trees for Teens	Trees for E-bill
Customer Class	Residential	Governmental	Schools	Residential/ Business
Customer Status	Residential Customers	Public owned properties	Educational	Residential/ Business Customers
Building Type	N/A	N/A	N/A	N/A
Building Vintage	N/A	N/A	N/A	N/A
Geography	MidAmerican Iowa service territory	MidAmerican Iowa service territory	MidAmerican Iowa service territory	MidAmerican Iowa service territory
Building Size	N/A	N/A	N/A	N/A

Trade Ally Targets

The program relies primarily on the following trade allies for program delivery:

- Local nurseries
- Area conservation organizations
- Government agencies and non-profits
- Municipal government representatives
- Community leaders
- School administrations and teachers

The IDNR and local area conservation organizations play a large role in our Trees program.

Promotion

MidAmerican will promote the Plant Some Shade program through bill inserts, newspaper advertising, radio advertising and online advertising. The bill inserts will reference the cities where events are planned for the Plant Some Shade program.

MidAmerican call center associates will recommend the Trees for E-bill program to likely participants. This program is also advertised on MidAmerican's Web page where customers can sign up through MidAmerican's website for service.

MidAmerican will promote the Trees Please! program through direct mailing to the cities in MidAmerican's Iowa service territory.

Trees for Kids/Teens: The IDNR contacts schools regarding educational materials and grant applications for school plantings.

MidAmerican Energy Company
Iowa Energy Efficiency Plan 2014-2018
Assessments

Description of Program

The money MidAmerican collects from customers to fund the Iowa Energy Center, the Center for Global and Regional Environmental Research and to pay the Iowa Utilities Board direct assessments is included in the Plan under Assessments. Pursuant to section 476.10A, all gas and electric utilities are required to remit one-tenth of one percent of the total gross operating revenues derived from intrastate public utility operations to the treasurer of state. Of the amounts collected, eighty five percent is appropriated to the Iowa energy center and fifteen percent is appropriated to the center for global and regional environmental research. These amounts are in addition to amounts permitted to be assessed pursuant to section 476.10.

These assessments are allocated between residential and nonresidential customers as follows:

- Electric assessments:
  - 45 percent residential
  - 54 percent nonresidential
  - 1 percent lighting
- Natural gas assessments:
  - 60 percent residential
  - 40 percent nonresidential

Measure List

There are no measures for this program.

Budgets

Anticipated five-year spending for the Assessments program is as follows:

Electric Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 1,320,268	$ -	$ 1,320,268
2015	$ 1,353,275	$ -	$ 1,353,275
2016	$ 1,387,107	$ -	$ 1,387,107
2017	$ 1,421,785	$ -	$ 1,421,785
2018	$ 1,457,330	$ -	$ 1,457,330
Total	$ 6,939,765	$ -	$ 6,939,765

Gas Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 585,829	$ -	$ 585,829
2015	$ 600,475	$ -	$ 600,475
2016	$ 615,487	$ -	$ 615,487
2017	$ 630,874	$ -	$ 630,874
2018	$ 646,646	$ -	$ 646,646
Total	$ 3,079,311	$ -	$ 3,079,311

Total Spending	Administrative Cost	Incentive Cost	Total Cost
2014	$ 1,906,097	$ -	$ 1,906,097
2015	$ 1,953,750	$ -	$ 1,953,750
2016	$ 2,002,594	$ -	$ 2,002,594
2017	$ 2,052,659	$ -	$ 2,052,659
2018	$ 2,103,976	$ -	$ 2,103,976
Total	$ 10,019,076	$ -	$ 10,019,076

Energy Savings

There are no gas or electric savings associated with this program.

Participation

Not applicable.

Cost Effectiveness

Anticipated total net economic benefits of the program are as follows:

Program	Electric	Gas	Total
Program Benefits	$ -	$ -	$ -
Program Costs	$ 6,614,248	$ 2,934,873	$ 9,549,121
Net Economic Benefits	$ (6,614,248)	$ (2,934,873)	$ (9,549,121)
Societal Test Ratio	-	-	-

MidAmerican Energy Company
Iowa Energy Efficiency Plan 2014-2018
Support Functions

Monitoring and Verification Plan – Process Review

MidAmerican will contract with an independent third-party energy efficiency program evaluator to conduct ongoing analyses of MidAmerican's energy efficiency portfolio across all states it serves. MidAmerican will review with the Office of Consumer Advocate any requests for proposals to be issued to obtain the services of the third-party evaluator. The analyses provided by the evaluator will consist of both a process review and an impact review of each of MidAmerican's energy efficiency programs. A full analysis of each program will be conducted at least once during the 2014-2018 energy efficiency plans. New programs and programs with major changes will be evaluated within one year after those new programs or changes have been fully implemented. The contracting process will begin no later than six months after the beginning of the plan.

Process Review

The primary goals of the process reviews will be to provide actionable recommendations to MidAmerican to improve the design and implementation of its energy efficiency programs and to develop a best in class evaluation infrastructure for MidAmerican's energy efficiency programs.

Process evaluations will be systematic and transparent. Program evaluations will begin with documentation of current program design and results including successes and challenges. It is anticipated that researchable issues will emerge that will encompass program performance and operations, including quality of installations and process time for incentives, effectiveness of program marketing collateral and outreach methods, how program marketing and implementation processes can be revised to optimize cost-effectiveness, performance of newly selected implementation contractors, satisfaction of participants and other market actors, barriers to participation and/or more effective implementation, means for overcoming those barriers, and the effectiveness of the program delivery mechanism.

It is anticipated that the process of making recommendations related to researchable issues will involve interviews with program staff, customers, and market actors. Additionally, the third-party process review will include an evaluation of areas that affect all energy efficiency programs (information technology, marketing, and organizational issues). Included in the cross-cutting evaluation will be interviews with trade and customer relations teams, energy efficiency advertising and promotion teams, and the regulatory group.

Impact Review

The primary goals of the impact reviews will be to verify and document reported energy and demand savings associated with the individual programs and each portfolio of programs and to provide additional due diligence to project savings in addition to what is being provided by implementation contractors.

Impact evaluations will be systematic and transparent. The goals of the impact reviews will be to:

- Verify gross ex-ante savings
- Estimate net savings

Verification of Gross Savings

Verification of gross savings will involve verification that measures are installed and operating as anticipated and a review of the savings algorithms and deemed values used by MidAmerican in determining ex-ante savings. This review will include an estimation of the reasonableness of these calculations relative to calculations used in other programs, a review of inputs (including costs and savings) used in the calculations and verification that these inputs are properly recorded in MidAmerican's tracking systems, and an independent confirmation of savings estimates using simulation modeling, metering analysis, and statistical billing analysis where appropriate depending on the program. In addition, the impact verification will include a shelf survey to retailers to determine available measure stock and exit interviews with customers of retailers including information about purchases made, choices considered and factors determining choice.

In the case of custom projects, the review should include:

- Review of project description, documentation, and specifications.
- Review of invoices and dates of completion. In many cases, invoices provide the source of the specification via equipment identification, descriptions, and model numbers.
- Review of engineering analyses for technical soundness, appropriate baselines, and appropriateness for the specific application.
- Review of methods for determining demand savings to ensure they are consistent with program and/or utility methods for determining peak load/savings.
- Review of input data for appropriate baseline specifications and variables such as weather data, bin hours, and total annual hours and if they are consistent with facility operation.
- Review of project cost and baseline appropriateness. For example, should incremental costs and incremental savings versus a competing alternative be used or should the total cost of the measure and savings versus the actual old equipment be evaluated?
- Phone interview with the customer to verify the measure has been implemented, hours of use, duty cycle, and make and model of the equipment.
- Phone interview of the contractor or design professional responsible for the implementation to gather additional project specifics and operating characteristics as needed.
- Determination that the measure complies with program rules and is eligible based on payback limits, fuel switching issues, supply side technologies, and minimum equipment performance requirements.

The results of these analyses will yield realization rates by program and measure within each program that can be used to estimate gross ex-post savings both proactively and on a forward-looking basis.

Internal Verification of Projects

MidAmerican will conduct verification activities to ensure that measures have been installed across the energy efficiency portfolio. Currently, MidAmerican does 100 percent on-site inspection for all:

- Self-installed equipment (e.g., insulation)
- Equipment with rebates above $30,000

For other programs/measures, MidAmerican will select a random sample of program participants for verification. Contractors that are new to programs or have had failed past verifications will receive an oversample of verification visits and these will gradually be reduced (although not eliminated completely) with high compliance rates.

During the site visits, MidAmerican's program contractors verify that the equipment is installed, operating and matches measure characteristics tracked in its Energy Efficiency Management Information System.

Monitoring and Verification Plan – Statewide Technical Reference Manual

MidAmerican will actively seek to enter into a joint agreement with the other IOUs operating energy efficiency programs in Iowa to contract with an independent third-party to develop an Iowa Statewide Technical Reference Manual (TRM). It is MidAmerican's hope that the contracting process will begin no later than six months after the beginning of the plan. MidAmerican believes that a reasonable target date for completion of the TRM would be July 1, 2016.

The TRM would be a document that contains a set of savings algorithms, incremental cost algorithms, and other information needed to determine gross energy savings and system net benefits associated with the offering of various energy efficiency measures and programs. The TRM is intended to be used by all IOUs offering programs in Iowa.

Objectives

Development of a TRM would serve the following objectives:

- The TRM would provide a basis for the consistent and reliable estimation of measure-level gross savings for electric and gas programs offered in Iowa.
- The TRM would serve as a common reference document for all IOUs, stakeholders, program implementers, and regulators, so as to provide transparency to all parties regarding savings assumptions and calculations and the underlying sources of those assumptions and calculations.
- The TRM would support the consistent and transparent calculation of system net benefits and the cost-effectiveness of energy efficiency programs offered in Iowa.
- The TRM would provide standard protocols for determining energy savings for common custom projects as appropriate.
- The TRM would serve as a primary source document for future Statewide Assessment of Energy Efficiency Potential studies, and will identify current gaps in robust, primary data in Iowa that should be addressed in future assessments.

Scope

At a minimum, the TRM would include the following measure-level information:

- Name and description of the measure.
- Baseline equipment or conditions for each measure, incorporating federal and state equipment and building efficiency codes and standards where appropriate.
- Expected lifetime of the measure.
- Costs for the measure, including labor and non-labor costs, effective date for the costs and regional variations for the costs, if applicable
- An equation or set of equations used to calculate electric energy savings, gas savings, coincident electric peak demand savings, peak day natural gas savings, water savings, and other non-energy benefits as appropriate including an example calculation based on assumed values for parameters included in the calculation.
- Information on interactive effects between measures where appropriate.
- Information on the load shape to be used to evaluate the system benefits associated with the measure.
- An equation or set of equations used to calculate the incremental cost of the measure for use in the determination of system net benefits and cost-effectiveness, including an example calculation based on assumed values for parameters included in the calculation.
- Information regarding specific requirements for the measure to qualify for inclusion in the energy efficiency program.

In addition to the information listed above, the TRM would include the following general information:

- Guidelines for use of the TRM.
- Definitions of terms used in the TRM.
- A defined process for updating and maintaining the TRM which would also include the preservation of a clear record of the deemed values, equations, etc., that were in effect at various times to facilitate evaluation and data accuracy reviews. At a minimum, the TRM would be updated annually. Known errors would be corrected as soon as possible. Major changes in public policy such as codes and standards, or technological advances could also create a need for mid-year adjustments.
- Full documentation of the assumptions and data sources used in the development of the TRM, including links to sources of data that are publicly available.
- A well-defined dispute resolution process to be used in the event that IOUs, stakeholders, and regulators are unable to agree on savings algorithms or other information to be included in the TRM.

Organization

The TRM would be developed and maintained by a third-party through a contract to be entered into jointly by the Iowa IOUs. The third-party contractor would be supported by a standing steering committee with representation from each of the Iowa IOUs and the Iowa Office of Consumer Advocate. A larger stakeholder advisory group would be organized to provide input to the development process, thus ensuring that the TRM would have input and support from a broad stakeholder group in Iowa.

The TRM would be a living document. While it is expected that significant resources would be involved in the initial development of the TRM, the third-party contractor, steering committee, and stakeholder advisory group would play an important role in the continued maintenance of the TRM, ensuring that the TRM would be a useful resource for Iowa energy efficiency program development and evaluation over the long term.

Benefits

Adoption of a TRM would provide the following significant benefits for energy efficiency programs offered in Iowa.

- A TRM would provide greater consistency and credibility for savings and benefits determinations for energy efficiency programs. Increased consistency would simplify the comparison of savings resulting from similar programs for different IOUs in Iowa, which would help support the development of best practices for energy efficiency programs.
- A TRM would provide increased transparency of savings determinations, which would help stakeholders manage various types of uncertainties associated with energy efficiency programs. Examples include:
- Helping utility-run programs manage regulatory uncertainty
- Enabling resource planners to clearly assess the validity of energy savings estimates, allowing energy efficiency to be treated more similarly to supply side resource options
- Increasing broader market confidence in energy savings determinations which reduces financial risk and helps energy efficiency programs meet energy efficiency resource adequacy requirements in regional transmission organizations.
- A TRM would improve energy efficiency program evaluation by clearly identifying parameters used in measuring and verifying results and allowing IOUs and other stakeholders to set EM&V requirements early on, thus improving alignment between program implementation and evaluation. Improved EM&V can provide an improved basis for complying with energy efficiency resource standards and establish energy efficiency as a reliable and predictable resource. EM&V results would also be used to improve and update the TRM, using the steering committee and stakeholder processes described above.
- A TRM would provide a basis for the development of future Statewide Assessment of Energy Efficiency projects and would eliminate some of the recurring development work required in those projects.

Costs

The budget for the initial development of a TRM is expected to be approximately $250,000. The cost would be split equitably between the Iowa IOUs and would be recovered through the IOUs respective energy efficiency cost recovery mechanisms.

Reporting

MidAmerican will conduct analyses of its programs on an annual basis and will report annual results to the Board. Annual reports will provide the following information:

- Energy and demand electric and gas savings by program and measure within each program on the following bases:
- Gross ax-ante
- Gross ex-post (where information is available from impact reviews)
- Comparisons of gross ex-ante savings to plan goals
- Estimated program lifetime savings
- Spending by program and measure within each program
- Comparisons of spending to plan goals
- Cost-effectiveness calculations by program based on the Societal Cost, the Total Resource Cost, the Utility, the Ratepayer Impact and the Participant tests
- Load shapes and avoided costs used in the cost-effectiveness analyses will be consistent with those used in the development of this plan.
- Measure lives and incremental costs will be consistent with information in the measure fact sheets provided in this plan.
- Calculations will be conducted on a gross ex-ante basis.
- Cost-effectiveness calculations by measure within each program based on the Societal Cost test

MidAmerican will also communicate informally with Board staff in the event that any changes to the operational details of the programs are needed.

Accounting Plan and Procedures

The rules on energy efficiency cost recovery defined in Section 199-35.12(1) of the Iowa Administrative Code require each utility to establish a plan and procedures to account for energy efficiency costs incurred on or after July 1, 1990. The rules also prescribe a set of procedures to insure that these costs are categorized appropriately and in sufficient detail to support a prudent review. Among other things, the rules specifically require that:

Each utility shall maintain a subaccount system, a work order system, or an accounting system that identifies individual costs by each program.

Each utility shall maintain accurate employee, equipment, materials, and other records that identify all amounts related to each individual energy efficiency program.

In accordance with these rules and in support of MidAmerican's monitoring and evaluation activities, the following system, activities and procedures have been established.

Accounting Plan

MidAmerican will use specified activities within its accounting system to identify expenditures as energy efficiency expenditures. Costs will be separated by program, cost category and resource using project numbers, subnumbers and cost elements. The project numbers are used to indicate the energy efficiency program for which the costs are being incurred. Project subnumbers are used to designate the category of costs, such as planning, administration, customer incentives, etc. Cost elements are used to indicate the type of cost such as labor, transportation or non-labor voucher costs.

Using the Oracle Financials code block, employees assign the appropriate energy efficiency code block to time sheets, purchase orders, requests for payment, and employee expense reports. Those elements of the code block that are specifically used to account for energy efficiency expenditures are as follows:

Responsibility Center

The responsibility center identifies the organizational unit within the company that is responsible for the expenditure.

Bill Center

The bill center identifies the business unit for which the cost was incurred. For energy-efficiency expenditures within the Delivery business unit, the bill center is the same as the responsibility center.

Utility Indicator

The utility indicator identifies which utility is responsible for the expenditure – electric, gas or common (allocated to gas and electric).

Activity Number

The activity number is used to identify energy efficiency expenditures. The activity numbers used are as follows:

Electric Activities	Description
173172	MEC Electric Recoveries Over/Under
186355	Iowa Electric Deferred Expenditures
186385	MEC Commercial New Construction Discount
254200	MEC Commercial New Construction Regulated Liability
419007	Interest Income
431061	Interest Expense – MEC Commercial New Construction
440011	Electric Residential Revenue
440045	Electric Residential Over/Under Recoveries
442011	Electric Small General Service Revenue
442045	Electric Small General Service Over/Under Recoveries
442211	Electric Large General Service Revenue
442245	Electric Large General Service Over/Under Recoveries
444211	Electric Street Lighting Revenue
444245	Electric Street Lighting Over/Under Recoveries
445011	Electric Public Authorities Revenue
908101	Electric Expense – Embedded
908105	Electric Amortization

Gas Activities	Description
173272	MEC Gas Recoveries Over/Under
186345	Iowa Gas Deferred Expenditures
186385	MEC Commercial New Construction Discount
254200	MEC Commercial New Construction Regulated Liability
419007	Interest Income
431061	Interest Expense – MEC Commercial New Construction
480011	Gas Residential Revenue
480042	Gas Residential Over/Under Recoveries
481011	Gas Commercial Service Revenue
481042	Gas Commercial Over/Under Recoveries
481211	Gas Industrial Service Revenue
481242	Gas Industrial Over/Under Recoveries
489021	Gas Transportation Revenue – Monthly Metering
489042	Gas Transportation Over/Under Recoveries
489062	Gas Transportation Revenue – Daily Metering
908205	Gas Amortization

Project Number

The project number is used to assign energy efficiency expenditures to programs. The project numbers used are as follows:

Electric Projects	Description
17802	Residential Equipment
17804	Commercial New Construction
17805	Nonresidential Equipment
17806	Residential New Construction
17808	Residential Assessment
17812	Energy Efficiency Management – Nonresidential Programs
17813	Low Income – Nonresidential
17818	Energy Efficiency Management - Residential Programs
17821	Nonresidential Energy Analysis
17831	Residential Load Management
17834	Energy Efficiency Management – All Programs
17836	Nonresidential Load Management
17838	Trees Programs
17839	Low Income – Residential
17842	Assessments
17848	Education – Nonresidential
17849	Education – Residential
17852	Agriculture – Nonresidential
17853	Agriculture – Residential
17854	Multifamily Housing – Nonresidential
17855	Multifamily Housing – Residential
17856	Appliance Recycling – Nonresidential
17857	Appliance Recycling – Residential
17858	Residential Upstream Retail Lighting
17859	Residential HVAC Tune-up
17860	Residential Behavioral
17861	Commercial Assessment

Gas Projects	Description
46002	Residential New Construction
98645	Trees Programs
98648	Nonresidential Energy Analysis
98656	Assessments
98849	Energy Efficiency Management – Residential Programs
98850	Low Income – Nonresidential
98851	Commercial New Construction
98852	Energy Efficiency Management – Nonresidential Programs
98853	Energy Efficiency Management – All Programs
98854	Low Income – Residential
98855	Residential Assessment
98856	Residential Equipment
98858	Nonresidential Equipment
98864	Education – Nonresidential
98865	Education – Residential
98866	Agriculture – Nonresidential
98867	Agriculture – Residential
98868	Multifamily Housing – Nonresidential
98869	Multifamily Housing – Residential
98870	Residential HVAC Tune-up
98871	Residential Behavioral
98872	Commercial Assessment

Project Subnumbers

The general project subnumbers are used to identify the cost category of the expenditure. Additional letters or numbers may be added to subnumbers to further segregate costs. The general project subnumbers used are as follows:

Subnumber	Description
30	Planning and Design
31	Administration
32	Advertising and Promotion
33	Customer Incentives
34	Monitoring and Evaluation
35	Miscellaneous
36	Equipment
37	Installation

Location Code

All energy efficiency expenditures will be accounted for using the Iowa location code 200.

Cost Elements

Appropriate cost elements will be used to identify the type of cost, i.e. labor, transportation, non-labor.

Procedures

Training in appropriate cost assignment will be provided at least annually to all employees charging energy efficiency activities.

Direct Costs

Direct costs are expenditures that can be specifically assigned to individual energy efficiency programs. All employees active in the design, implementation, or evaluation of energy efficiency programs and related activities shall be trained in the use of the energy efficiency code block and will be instructed to charge all costs, both labor and non-labor, that are incurred in the performance of their energy efficiency assignments to these energy efficiency activities and projects.

Accruals

MidAmerican accrues individually energy efficiency-budgeted funds for certain nonresidential projects with long lead times between project enrollment and completion. This process results in charging anticipated expenses in the year in which the large projects are pre-approved. This procedure enables MidAmerican to enter each new plan year with its planned budget intact for projects in that plan year. Further, this procedure responds fully to our nonresidential customers' concerns that the energy efficiency program(s) may not be administered in the future due to unforeseen regulatory changes and, thus, the customers might not receive their earned and promised incentive payments. Quarterly, journal entries are made for all new projects meeting minimum criteria, charging the appropriate energy efficiency account codeblock for the total amount of the incentive less a discount amount. The discount amount is computed using U.S. Treasury commercial paper rates and debited to a deferred debit activity (not an energy efficiency activity). The total amount of the incentive is credited to a regulated liability activity. The discounted incentive is debited to the deferred energy efficiency activity. As a result of this entry, MidAmerican receives these incentive dollars in the current EECR reconciliation year, but at a reduced level to reflect the fact that they have not actually paid the incentives yet. These amounts are reviewed quarterly and updated to reflect changes in estimated expenses and completion dates or incentive payments made. An interest income activity is debited and the discount activity is credited to offset the interest MidAmerican receives on this revenue. The regulated liability activity is reduced as incentive payments are made, and eventually zeroed out, as is the discount activity, upon payment of the final incentive. This procedure benefits both the utility and the customer. MidAmerican begins recovery of the amount in the year of occurrence of the energy efficiency expense and, through the regulated activity, the customer is assured payment of the incentive regardless of what entity, if any, is administering energy efficiency programs at that time. Currently, this individual accrual procedure is used only for the Commercial New Construction program.

MidAmerican also accrues quarterly a lump-sum for all other incentives to be paid in the subsequent 12 months. Because of the high volume/low individual value of these transactions, it would be virtually impossible to precisely determine a value to accrue for these unrecorded liabilities. Therefore, a lump-sum accrual is made for unprocessed incentive payments based on an estimate made with data extracted from the accounting system using historical experience for payments processed subsequent to the period in which the customer installation occurred. This accrual is recorded as a debit to a deferred account and a credit to an accrued liability account.

Indirect Costs

Indirect costs are expenditures for various employee benefits and payroll taxes that are charged to energy efficiency programs through the use of loading rates. The loading rates are periodically reviewed to determine whether revisions are needed.

Adjustments

Adjustments are amounts ordered by the Iowa Utilities Board (Board) in prudence reviews. Adjustments will be recognized as an offset to the amount approved for recovery in the deferred debit accounts and also recorded as a non-operating expense.

Incremental and Embedded Costs

Energy efficiency expenditures include non-labor costs that are not included in the revenue requirement approved by the Board in the MidAmerican's most recent general rate proceeding (incremental costs), as well as those that are in the revenue requirement (embedded costs). To identify the appropriate disposition of costs, non-labor expenditures accumulated in the deferred debit activities during any month are analyzed to determine whether the costs should remain in the deferral or be expensed.

Recoveries

Energy efficiency expenditures are charged to unique deferred debit activities. When amounts are billed to customers, they will be credited to the appropriate revenue activity through MidAmerican's Customer Service System (CSS). Anticipated recoveries will be projected for the 12-month recovery period and as amounts are recovered from customers an entry will be made to record the amount over or under the anticipated recovery to the appropriate activities.

Amortization

The deferred debits for energy efficiency expenditures will be reduced on a monthly basis by the amount of the approved expenditures as they are amortized.