BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF SOUTH DAKOTA

IN RE:	)	
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MIDAMERICAN ENERGY COMPANY	)	DOCKET NO. GE 12 - _____
	)	
REQUEST FOR APPROVAL OF	)	
ENERGY EFFICINECY PLAN	)	

DIRECT TESTIMONY
OF
CHARLES B. REA

Q. Please state your name and business address.

A. My name is Charles B. Rea. My business address is 106 East Second Street, Davenport, Iowa 25801.

Q. By whom are you employed and in what position?

A. I am employed by MidAmerican Energy Company (MidAmerican). My title is Manager, Regulatory Strategic Analysis.

Q. Please describe the responsibilities of your current position.

A. I and my group are responsible for the analytical activities associated with energy efficiency at MidAmerican. This includes analysis of program savings, spending, and budgets, and analysis of the cost-effectiveness of MidAmerican's energy efficiency programs. In addition, I have managerial responsibility for MidAmerican's load research program and I am responsible for special projects in MidAmerican's regulatory area that include, among other things, electric and gas cost of service issues, analytical and pricing support for retail contracts, and dynamic pricing programs.

Q. Please describe your educational and employment background.

A. I received a B.A. in Computer Science for the University of Illinois at Springfield in 1986 and a M.A. in Statistics and Operations Research form Southern Illinois University at Edwardsville in 1990. I have been employed by MidAmerican and its predecessor companies since 1990 and have worked in electric system planning, forecasting, load research, marketing, and rates.

Q. **What is the purpose of your testimony?**

A. The purpose of my testimony is to present MidAmerican's proposed energy efficiency plans for its gas and electric customers in South Dakota for 2013-2017. MidAmerican serves 86,686 natural gas customers, primarily in the Sioux Falls area, and 4,334 electric customers in a geographic area contiguous to Sioux City, Iowa.

Q. Are you sponsoring any exhibits?

A. I am sponsoring five exhibits with this testimony.

MidAmerican's proposed energy efficiency plan for South Dakota is presented in Exhibit 1. The plan document contains an overview of the portfolio, five year budgets and savings projections for the overall portfolio of programs, cost-effectiveness information for the portfolio, a monitoring and evaluation plan for the portfolio, and an accounting plan for the portfolio. In addition, the plan contains individual chapters for each program. Program chapters include a description of each program, budgets and savings estimates by year, cost-effectiveness information for each program, a description of how each program operates, and a marketing plan. The plan document also includes an Appendix A that contains fact sheets for each measure to be offered in each program

which include measure descriptions, baselines, useful life data, savings and incremental cost algorithms, incentive levels, and expected payback data.

Exhibit 2 includes an analysis of the impact of MidAmerican's proposed plan on electric and gas ratepayers broken down into residential and non-residential classes. The ratepayer impact analysis provides expected bill impacts on a dollars per month, dollars per year, and percentage increase basis.

Exhibit 3 provides specific participation, savings, and incentives by measure within each program. This exhibit also provides cost-effectiveness data and avoided cost data by measure.

Exhibit 4 is a written description of how the planning model operates. It describes the various inputs to the model and the sources of those inputs. General program inputs include avoided costs, customer energy rates, and discount rates. Inputs also include measure level load shapes, savings, incremental costs, useful lives, incentives, and non-energy benefits.

Q. Please describe MidAmerican's energy efficiency plan.

A. MidAmerican's 2013-2017 proposed South Dakota energy efficiency plan is a comprehensive portfolio of programs available to all MidAmerican South Dakota customers that provides education, technical assistance, rebates and incentives for energy efficiency projects and equipment in the following programs:

Residential Equipment – This program provides rebates to encourage customers to purchase high-efficiency cost-effective space conditioning equipment, water heating equipment and appliances.

Residential Audit – This program provides free energy audits, energy savings suggestions, direct installation of simple energy-efficiency measures and rebates for more extensive building shell retrofits like insulation, for homes over ten years old.

Residential Load Management – This program provides financial incentives to customers that allow MidAmerican to control their central air conditioning on summer peak days.

Nonresidential Equipment – This program provides rebates to encourage customers to purchase specified efficient heating, cooling, lighting, motor and commercial kitchen equipment.

Nonresidential Custom – This program provides financial incentives to encourage customers to pursue energy efficiency projects or purchase efficient equipment that does not fit into MidAmerican's other nonresidential programs, but that can be shown to save energy.

Small Commercial Audit – This program serves small business customers by providing energy audits, direct installation of simple energy-efficiency measures and rebates for more extensive projects.

Appliance Recycling – This program offers financial incentives to customers to stop using old, inefficient refrigerators, freezers and room air conditioners and helps them dispose of the old units.

Q. How is MidAmerican's proposed energy efficiency plan different from the energy efficiency plan currently in place?

A. MidAmerican's proposed plan is essentially a continuation of the current energy efficiency plan. There are some significant changes in the details of MidAmerican's

programs, however. MidAmerican has updated its avoided costs, recognizing the significant decrease in expected future natural gas prices. MidAmerican has also incorporated changes in standards resulting from implementation of the requirements of the Energy Independence and Security Act of 2007. In addition, MidAmerican has prepared this plan by examining individually the cost-effectiveness of each of the measures offered, including only those that are expected to provide net benefits to MidAmerican's South Dakota customers.

Q. How does MidAmerican propose to recover the cost of offering its proposed energy efficiency portfolio?

A. MidAmerican proposes to use the Electric and Gas Energy Efficiency Cost Recovery riders currently in MidAmerican's tariffs to recover the cost of its proposed 2013-2017 energy efficiency plan. These tariffs allow for contemporaneous recovery of energy efficiency program costs from eligible customers on a volumetric basis, with an annual reconciliation of over- or under-collections plus carrying costs rolling into rider recoveries in the following year. Both tariffs include a formula that defines the components of the calculation of the respective energy efficiency cost recovery factors and MidAmerican proposes to maintain these formulas and mechanisms going forward.

Q. How will MidAmerican's proposed energy efficiency plan benefit South Dakota customers?

A. The primary benefit of MidAmerican's proposed energy efficiency plan will be to reduce the long-term cost of providing energy (both electricity and natural gas) to South Dakota customers.

Q. Please explain.

A. The purpose of energy efficiency programs is to identify opportunities for customers to invest in energy efficient equipment and/or services where the cost of those investments is less than the anticipated cost of providing energy to the customer if the investment were not made. MidAmerican's proposed energy efficiency plan identifies those opportunities and provides education, technical assistance, and incentives to customers so that those cost-beneficial energy investments can be made. This process results in long-term economic benefits to all of MidAmerican's customers.

Q. If the energy efficient investments MidAmerican is including in its plan are already cost-beneficial to customers, why do customers need to be provided incentives in order to make the investments?

A. There may be a number of reasons why customers don't make investments in energy efficient equipment even though it may be in their best long-run economic interest to do so.

One reason is that many customers simply don't understand their options. One of the goals of a well-operated and well-marketed energy efficiency plan is to educate customers on the value of energy-efficient options for items like HVAC equipment and home appliances, and make it as easy as possible for customers to make those investments. For some customers, the initial cost of a project or piece of equipment may be a barrier to improving energy efficiency. Rebates offered through energy efficiency programs help that initial cost, making those investments more affordable.

Another reason customers may not participate is that retail rates are low enough that the short-run bill savings that an individual customer receives by making an energy-efficient investment isn't worth the cost of the investment even though the measure is

cost-effective in the long run to MidAmerican and its customers. This can happen when rates are considerably lower than the avoided cost of providing energy, especially for energy efficiency measures that save significant amounts of energy and capacity during the summer months. Incentives that reduce the effective cost of making energy efficiency investments make these investments more attractive to customers by helping to buy down the cost of the equipment and make it easier for individual customers to make investments that benefit all of MidAmerican's customers.

Energy efficiency investments also compete with other opportunities for customer investment. This can be especially true for commercial and industrial customers where there may be a variety of capital investments these customers can make that all compete for a limited amount of investments funds. Incentives that reduce the effective cost of making energy efficiency investments help improve the economics of making these investments and make them more attractive to customers.

Q. Why should MidAmerican's customers be expected to fund these incentives?

A. It is appropriate for all of MidAmerican's South Dakota customers to fund these incentives because all customers benefit in the long-run from the investments these incentives help to enable. MidAmerican's energy efficiency plan includes a variety of programs so that all customers have the opportunity to participate.

Each of the measures included in MidAmerican's proposed South Dakota energy efficiency plan has been determined to be cost-effective according to the Total Resource Cost test (TRC test) as I explain later in testimony. This means that the energy efficiency measures included in this plan are a cheaper and more economical way to provide energy than the traditional production and distribution of electricity and natural gas. This

reduces the long-term cost of providing energy to all South Dakota customers. Because these programs reduce the long-term energy cost for all customers have the opportunity to participate directly in these programs, it is appropriate to ask all customers to fund programs, paying both the administrative cost of operating these programs and the incentives that are offered to participating customers.

Q. How are the incentive levels for the various measures included in MidAmerican's proposed plan determined?

A. Incentive levels for the various measures in the proposed plan are set to satisfy four criteria:

1. Incentives are set such that all measures pass the participant test. This means that the value of the bill savings and incentives that the customer receives is greater than the customer's cost of making the investment.
2. Incentives are set such that all measures pass the utility test. This means that the avoided cost of the energy saved from instituting the measure is greater than the incentives paid to the customer for instituting the measure.
3. Incentives are set so that the payback for each measure is less than 25% of the useful life of each measure. For example, if a measure has an expected 20 year life, the incentives must be high enough so that the combination of incentives and bill savings results in a payback period of five years or less.
4. Incentives are set to be at least 25% of the incremental cost of each measure.

Audits and direct install measures associated with audits (showerheads and water pipe insulation, for example) are paid at 100% of cost. MidAmerican believes the use of these

criteria help ensure that incentives are large enough to change customer behavior, but still reflect good stewardship of ratepayer resources.

Q. What are the expected economic benefits associated with MidAmerican's proposed energy efficiency plan?

A. MidAmerican's proposed energy efficiency plan includes a cumulative energy savings target of 1,705,946 kWh and 500,324 therms over the five years of the plan. MidAmerican expects to deliver a present value of $3,907,079 of net economic benefits to its customers over the intended life of this plan.

Q. Is MidAmerican's plan cost effective?

A. Yes. The cost-effectiveness ratio for MidAmerican's plan as calculated by the TRC test is 2.02, which means that the total net present value of the anticipated savings for the plan is expected to exceed the total net present value of the cost needed to achieve those savings by a factor of 2.02. For every dollar spent by South Dakota customers, $2.02 in benefits (on a net present value basis) are received through the improvements made.

Q. Are there any components of MidAmerican's plan that are anticipated to be not cost-effective?

A. No. MidAmerican has not included any measures in its proposed South Dakota energy efficiency plan that are not cost effective on a planning basis as determined by the TRC test. MidAmerican expects all programs, and all measures within each program, to be cost-effective.

Q. Is MidAmerican asking to continue the utility incentive mechanism included in its current energy efficiency plan?

A. Yes. MidAmerican requests the continuation of its existing performance incentive approved by the Commission on April 6, 2010. MidAmerican's current incentive provides a return on its energy efficiency expenditures and includes the following elements:

- The return is the rate of return authorized in MidAmerican's most recent gas rate case in Docket No. NG-04-001.
- The incentive is calculated separately for gas and electric.
- The incentive is calculated by multiplying the authorized return by approved energy efficiency expenditures.
- An estimated incentive for the current year is based on the Commission-approved energy efficiency budget for that year that is to be included in the cost recovery factor.
- The final incentive award is determined in the next year's reconciliation and is capped at a return on the lower of actual energy efficiency expenditures or the budget approved by the Commission.
- The final incentive is reconciled with the cost recovery factor and any over or under collection is recovered in the following period.

Q. Are the measures included in MidAmerican's proposed plan the only measures that MidAmerican will feature over the course of the five years encompassed in the plan?

A. The measures included in this proposed plan are cost-effective measures that MidAmerican currently offers that have had historical participation such that MidAmerican is able to estimate future participation during the five-year plan horizon.

There may be cost-effective measures that become available part way through the plan, however, that would provide economic benefits to South Dakota customers. It is MidAmerican's intention to seek to include such measures in future plan offerings. MidAmerican will consider these possibilities as they come up and will notify the Commission when it anticipates adding additional measures to its plan offerings. In addition, customers may be interested in cost-effective measures that are currently available for which MidAmerican has no past participation information. MidAmerican will make those measures available to customers as needed and will notify the Commission of their inclusion in the plan.

Q. What will the impact be of MidAmerican's plan on South Dakota ratepayers?

A. Based on MidAmerican's proposed energy efficiency budgets and projected electric and gas sales for the 2013-2017 period, MidAmerican expects that the average residential customer will pay approximately $1.89 per month on their electric bill and $0.41 per month on their gas bill. The typical nonresidential customer is expected to pay $4.31 per month on their electric bill and $1.06 per month on their gas bill.

Q. Does this conclude your testimony?

A. Yes.