

Nonresidential Load Management Program

1. Program Description

This program provides large customers with financial incentives to reduce demand during MidAmerican's system peak hours. Customers use one of three strategies to reduce demand when MidAmerican calls a curtailment event: they shed load, shift load to non-peak periods or generate replacement power with on-site generators. Customers use MidAmerican's Curtailment Manager software system to help them and MidAmerican monitor load levels in near-real time during curtailment events. Customers also receive ongoing support to help them with program compliance from their assigned energy consultant (i.e., key account manager).

The program is marketed to customers as the Curtailment program. MidAmerican will implement the program in South Dakota beginning in 2009.

2. Operations

The program is delivered through MidAmerican's energy efficiency and energy consultant staff. Key steps in program participation include:

- Signing the program contract, which describes the rights and responsibilities of customers and MidAmerican in program operations as defined by the curtailment tariff rider.

Qualifying customers are offered year-to-year contracts.

- Installing necessary hardware and software systems. At a minimum, customers must have electric meters that can record interval data, as well as communication lines (telephone or internet TCP/IP) to transmit the interval data to MidAmerican. Participants also are encouraged to use the Curtailment Manager software for monitoring of curtailment performance in near-real time during curtailment events. Customers also may choose to

install additional systems to help their facilities meet their curtailment requirements (e.g., generators, control systems). Along with Curtailment Manager, MidAmerican also makes available additional software modules that can help customers track and manage energy consumption and costs throughout the year.

- Testing program operations, if possible, during a mock curtailment event that MidAmerican operates each year prior to the curtailment season (which runs from June 1 through Sept. 30).
- Meeting program requirements during curtailment events called during the curtailment season. MidAmerican is required to provide at least 30 minutes notice of each event if a warning has been issued at least 12 hours prior to the event. If a warning was not issued, MidAmerican must provide at least two hours notice. MidAmerican's electric trading group initiates the curtailment event, which is then communicated by energy efficiency to customers via the curtailment manager software as well as through personal communications from energy consultants.
- Reconciling program performance after the curtailment season, calculating incentives and delivering curtailment checks to customers. Customers that do not fully meet their contract requirements may be penalized by MidAmerican (per the tariff rider) and/or removed from the program.

3. Value Proposition

Customers participating in this program receive three main benefits:

- ***Financial benefits*** in the form of incentive payments that compensate the customer for reducing load during MidAmerican's system peak hours,

- **Surety** in the form of clear tariff requirements specifying notice requirements, number of curtailments and other program procedures and
- **Information** in a variety of formats, including advice from energy consultants on different curtailment strategies, analyses of interval load data and ongoing communication from energy consultants providing notification on curtailment days.

4. Customer Targets

MidAmerican will develop a curtailment service rider to its large electric tariffs that will define eligibility, limits and notice requirements for the program. Target customers include:

- Customers with a minimum of 250 kW of curtailable load,
- 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 or warehousing, hospitals, government entities, large offices and data/call centers,
- Customers with consistent load patterns throughout the summer period and
- Sophisticated customers with on-site energy managers.

Initially, in order to manage program participation, associated rate impacts and operational issues associated with this program, MidAmerican will cap program participation at 3 MW of contracted curtailable load. This is approximately twice the amount of load expected based on a detailed review of South Dakota customers. However, participation is highly uncertain. If additional customer interest develops for this program, MidAmerican will work with customers and its internal operations staff to adjust the cap appropriately.

Table 1 outlines customer eligibility requirements.

**Table 1
Customer Eligibility Parameters**

	Electric Equipment
Customer Class	Nonresidential electric rates serving larger customers
Customer Status	Customer building or business owners
Building Type	All
Business Type	All
Building Vintage	Existing and new construction
Geography	South Dakota electric territory
Size	Able to provide at least 250 kW in curtailment

MidAmerican performs periodic reviews of its curtailment program and reserves the right to adjust program requirements in the future as market conditions change. Since the program operates through a tariff rider, any program changes would need to be approved by the South Dakota Public Utilities Commission in formal proceedings.

5. Trade Ally Targets

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

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

6. Eligible Measures

In this program, MidAmerican does not promote specific measures, but instead rewards strategies that customers choose to implement to reduce load during system peak hours. The curtailment strategies used by customers include shedding load, shifting load to non-peak periods and generating with on-site generators. The most common technologies used to enable

participation include emergency generators, energy management systems and other control systems.

7. Financial Incentives

MidAmerican offers customers financial incentives in return for program participation. Customer incentives are defined on the basis of dollars per contract kilowatt of reduced demand.

Attachment C3-1 provides the draft Curtailment Service Rider that MidAmerican proposes for South Dakota, including program terms, conditions and incentives. MidAmerican also performs periodic reviews of its curtailment program and reserves the right to adjust program requirements and incentives in the future as market conditions change. Since the program operates through a tariff rider, any program changes would need to be approved by the South Dakota Public Utilities Commission in formal proceedings.

8. Promotion

The promotional strategy for this program relies primarily on one-on-one marketing with prospective customers by energy consultants. MidAmerican provides the following materials to support the energy consultant marketing efforts:

- A program brochure that clearly explains the program's general terms, including program 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 site.

9. Participation

Table 2 provides program participation assumptions.

**Table 2
Participation**

	2008	2009	2010
Electric Measures			
Customers (Cumulative)	-	2	2
Contract kW (at Meter)	-	1,500	1,500

10. Energy and Demand Savings

Table 3 provides energy and demand savings goals.

**Table 3
Cumulative Energy and Demand Savings**

	2008	2009	2010
Electric Impacts			
Annual Energy (kWh)	-	39,449	39,449
Peak Demand (kW)	-	1,445	1,445

11. Budget

Table 4 provides program budget assumptions.

**Table 4
Budget**

	2008	2009	2010
Electric Budget			
Planning & Design	\$0	\$2,000	\$2,000
Administration	\$0	\$8,000	\$8,000
Advertising & Promotion	\$0	\$3,000	\$3,000
Customer Incentives	\$0	\$51,000	\$51,000
Monitoring & Evaluation	\$0	\$7,000	\$7,000
Equipment	\$0	\$0	\$0
Installation	\$0	\$0	\$0
Electric Total	\$0	\$71,000	\$71,000

12. Cost-Effectiveness Results

Table 5 provides program cost-effectiveness results.

Table 5
Cost-Effectiveness Results*

Lifecycle Societal Benefits (NPV)	\$ 1,328,199
Lifecycle Societal Costs (NPV)	\$ 517,392
Net Societal Benefits (NPV)	\$ 810,807
Benefit-Cost Ratio	2.57

*Includes lifecycle cost and benefits of new participants added from 2009-11, to allow programs to reach full participation.

Attachment C3-1

2007 Iowa

Nonresidential Load Management Program



MIDAMERICAN ENERGY COMPANY
ELECTRIC TARIFF NO. 1
FILED with the SOUTH DAKOTA P.U.C.

Section No. 3
Original Sheet No. D-48

Class of Service Rider No. 5 to Electric General Service and Large General Service – Curtailment Service

APPLICABLE:

At the option of the customer under General Service and Large General Service Price Schedules who demonstrates a continuing ability and willingness to curtail 250 kW or more during Company-specified curtailment periods. Usage measured by more than one meter at multiple locations may not be combined for purposes of qualifying for service under this rider. The customer is subject to the applicable terms and conditions of the Company's Electric Service Policies.

CHARACTER:

Alternating current; 60 Hz; single or three phase nominal voltages offered by the Company, as further described in the Company's Electric Service Policies.

NET MONTHLY RATE:

Charges for service hereunder will be at the prices specified in the price schedules to which this rider applies, subject to the following additions and modifications:

Curtailment Credit:

Annual Credit per kW of curtailable load to be offered:

\$32.93/kW (year-to-year contract)

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Class of Service Rider No. 5 to Electric General Service and Large General Service – Curtailment Service (Continued)

If a customer's failure to curtail to the firm power level when requested results in a Company purchase of capacity, as required by the Mid-Continent Area Power Pool Agreement or superseding agreement with a Reliability Coordinator such as Midwest Reliability Organization, herein collectively referred to as MAPP, the customer will reimburse the Company for a proportionate share of this capacity. This amount will not exceed the customer's total annual credit for curtailable load.

In the event of a failure of the customer's standby generating equipment, or other unanticipated non-recurring condition (excluding the customer's failure to reduce production levels), the Company, at its sole discretion, may waive the customer's proportionate share of a capacity purchase as required by MAPP. The customer shall notify the Company immediately by telephone, e-mail, or facsimile after obtaining knowledge of a condition contemplated by this paragraph.

Any payment made to the Company for a customer's proportionate share of a capacity purchase as required by MAPP, or any waiver of such payment, shall not be construed as giving the customer the right to exceed the firm power level during any subsequent curtailment periods.

Customers may request a change in the firm power level annually. In addition, on 24 hours' notice, customers may cancel service under this rider. However, the customer will be responsible for its allocated share of any MAPP capacity purchases incurred prior to the effective time of the service cancellation and shall reimburse the Company for all credits received during the calendar year.

Customers shall notify the Company immediately upon obtaining knowledge of a need to increase its firm power level. If the requested increase in the firm power level is a result of an increase in the customer's expected load at time of system peak, the request will be automatically accommodated. If the requested increase in the firm power level is the result of the customer's desire to transfer load from its curtailable load to its firm power level, the Company will accommodate the request only if capacity is available.



Class of Service Rider No. 5 to Electric General Service and Large General Service – Curtailment Service (Continued)

CURTAILMENT PERIODS:

The Company may establish a curtailment period by providing notice to the customer that curtailment is required, whenever at the Company's discretion such curtailment may be appropriate.

If a curtailment is to be ordered for the purpose of avoiding MAPP capacity purchases related to peak system loads, the Company may establish the curtailment period by giving a 30-minute notice to the customer, provided the customer was alerted to the possibility of curtailment 12 or more hours prior to the beginning of the curtailment period. Otherwise, the customer may require the Company to provide 2-hour notice for the purpose of avoiding MAPP capacity purchases. The curtailment period shall continue until the Company has provided specific notice of its termination, or a maximum of 6 hours, whichever is shorter. The maximum number of curtailment periods for the purpose of avoiding MAPP capacity purchases related to peak system loads (summer period only, June through September) during a calendar year will be 16.

If a curtailment is to be ordered because of operating conditions, the Company will endeavor to provide as much advance notice as practicable under the circumstances, but may establish the curtailment period immediately upon notice. In such a case, the curtailment would continue until notified by the Company.

The Company may randomly separate participants into curtailable groups of comparable net loads. The Company may establish a curtailment period that only affects one curtailable group, or multiple groups, on a given day. If only one curtailable group is curtailed, the Company will rotate between curtailable groups on subsequent curtailments.

Request for restriction of the customer's load to facilitate maintenance or replacement of equipment at or near the customer's premises shall not be deemed to establish a curtailment period.

PARTICIPATION:

The Company reserves the right to limit participation to a state-wide total of 3,000 kW of curtailable load.

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MIDAMERICAN ENERGY COMPANY
ELECTRIC TARIFF NO. 1
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Section No. 3
Original Sheet No. D-48d

Class of Service Rider No. 5 to Electric General Service and Large General Service – Curtailment Service (Continued)

DEFINITIONS:

Curtailment Service: Electric service which includes a credit for those customers who agree, on notice from the Company, to reduce electric demand to a predetermined level (firm power level).

Firm Power Level: The level to which the customer has previously agreed to reduce usage during a curtailment period.

Expected Load at Time of System Peak: The load which would normally be placed on the Company's system by the customer at the time of system peak. The expected load will be established between the Company and customer based on load profiles, known load additions or deletions, and typical operations.

Curtailable Load: Difference between the expected load at the time of system peak and the firm power level.

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