

Instructions for Bidders

Bidders must complete the forms enclosed with this RFP to be considered for participation in MidAmerican Energy's Efficiency Bid program.

Projects that save at least 200,000 kWh annually or 15,000 therms annually are eligible for submission to this program. To ensure that incentives are available to multiple Sponsors, MidAmerican will limit the incentives available to any one Sponsor to no more than 25 percent of the incentive pool available for each bid cycle. Bidders may submit multiple bids or combine multiple projects within a single bid as long as bid size limitations are met. MidAmerican reserves the right to waive these restrictions if it appears they may prevent the program from achieving savings goals.

All bids must be completed and submitted in hard copy format to the Program Administrator. Fax and electronic submittals will not be accepted. Electronic copies of the proposal forms and the program manual are available at the program's Web site (www.midamericanenergy.com/ebid) or by contacting the Program Administrator.

Bids must be received by **5 p.m. Central Daylight Time on April 30, 2004**, at the address listed below. To ensure fairness, Bids received after this deadline will be returned unopened. It is the responsibility of the bidder to ensure that bids are received by the Program Administrator by this date and time. Please send bids to:

Attn: Efficiency Bid Program Administrator
Nexant, Inc.
2702 International Lane, # 200
Madison, WI 53704

Additional contact information:

Phone: (608) 246-0535
Fax: (608) 246-2723
E-mail: efficiencybid@nexant.com

Winning bidders will be contacted by May 31, 2004. In order to participate in Efficiency Bid, winning bidders will be required to sign a Standard Program Agreement with MidAmerican. A copy of the Agreement will be available at the program's Web site at www.midamericanenergy.com/ebid or by contacting the Program Administrator.

This RFP does not commit MidAmerican to award a contract, pay any costs incurred in the preparation of a bid in response to this RFP, or to produce or contract for services. MidAmerican reserves the right to modify or withdraw this Request for Proposal, to reject any or all bids, to waive any informalities or technical defects in bids, and to accept any item or group of items in the bid, as may be in the best interest of MidAmerican.

Informational workshops were held during the week of March 29 to allow interested parties to ask questions about the RFP and Efficiency Bid program.

Bidders having questions regarding this RFP or the program in general are encouraged to contact the Program Administrator at the address and phone numbers listed above.

A bid may include proprietary or confidential information. MidAmerican will take reasonable precautions and use reasonable efforts to protect such information provided that it is clearly identified as proprietary and confidential information on the page where it appears.

Upon prior notice to the bidder, proprietary or confidential information may be made available to the Iowa Utilities Board or other government agencies having an interest in these matters.

MidAmerican reserves the right to release proprietary information to its agents or contractors for the purpose of evaluating bids. Such agents and contractors will be bound to the same standard of care as MidAmerican with respect to disclosure before, during and after the solicitation process. Information disclosed in a bid and the attendant submissions are the property of MidAmerican unless specific reference is made to data that the bidder considers proprietary.

Administrator Use Only

Bidder Name: Example, Inc.
Date: 4/1/04

App. #: _____

Date Rec'd: _____

Bidder Profile

Parent Company (if applicable): Example, Inc.
Parent Co. Tax ID No.
(if no parent, bidder Tax ID): 123456789
Contact Name: John Doe
Contact Address
(Street, City, State, Zip): 123 Efficiency Lane
Exampleville, IA
Contact Phone: 555-1234 Contact Fax: 555-4321
Contact E-mail: jdoe@exampleinc.com

Bid Price and Target Demand Reduction

A Bid Price is required for each project the bidder proposes to implement under the program. The bid ceiling price for electric energy reduction projects is **\$0.06/kWh**. The bid ceiling price for thermal energy (natural gas) reduction projects is **\$0.50/therm**. Bid Price ceilings are provided as a guideline to aid the bidder in the preparation of a cost-effective bid. Sponsors are advised that bids that exceed the ceiling may not score well in MidAmerican's cost-effectiveness tests.

Minimum equipment efficiency standards must be used in calculating Demand Reduction and are listed in the Program Manual, Appendix B. Please contact the Program Administrator for assistance in identifying baseline efficiencies if needed.

The bidder must meet the project deadlines established in Table 2, Section 2.1, of the Program Manual in order to receive full award payment.

The minimum bid size for electric energy efficiency projects is 200,000 kWh of annual electric energy savings, and for natural gas energy efficiency projects is 15,000 therms of annual energy savings. To ensure that incentives are available to multiple Sponsors/Hosts, each Sponsor/Host will be limited to a maximum incentive amount of 25 percent of the available incentive pool for the bidding round. Bidders may submit multiple bids or combine multiple projects within a single proposal as long as the minimum and maximum bid size limitations are met.

	Electric Energy Reduction	Units	Thermal Energy Reduction	Units	Total
Bid Price (\$/Unit)	0.045	\$/kWh	0.38	\$/therm	
Bid Target Energy Reduction	396,537	kWh	43,337	therms	
Incentive (<i>Bid Price * Demand or Energy Reduction, \$</i>):	17,844.17		16,468.06		34,312.23

Identified Projects

Please summarize any preliminary identified projects in the following table. Attach additional information as necessary. Identification of a specific project(s) is not a requirement for participation in Efficiency Bid; however, bidders with an identified project(s) will be given additional consideration in the bid evaluation process.

Bidders who are bidding on behalf of a Host must provide a completed and signed Host Customer Acknowledgement Form (included at the end of this RFP) for each individual project identified in their bid. Bidders who are themselves Hosts need not complete this form.

Minimum equipment efficiency standards must be used in calculating Energy Reduction and are listed in the Program Manual, Appendix B. Please contact the Program Administrator for assistance in identifying baseline efficiencies if needed.

Please include documentation to support your estimates of savings and project costs. Please list all assumptions made in preparing these estimates.

Project Name/Description	Estimated Project Cost (\$)	Electric Energy Reduction (kWh)	Value of Electric Energy Savings (\$)	Natural Gas Energy Reduction (therms)	Value of Natural Gas Savings
Warehouse A lighting retrofit	19,000.00	236,433	14,185.98		
Hot Water Heater Upgrade	75,000.00			43,337	29,469.16
Chiller Upgrade	100,000.00	160,104	9,606.24		
Totals:	\$194,000.00		\$23,792.22		\$29,469.16

Previous DSM Program Participation

Please note below your previous participation (if any) in DSM programs offered by MidAmerican.

Date	Program Name	Project Description
3/12/03	Heating & Cooling	Replaced office area roof top units
8/4/02	Motors & VSD	Replaced process water pump motors. Added VFD control.

Bidder Signature

By signing below, you acknowledge the following:

- You have read and understood the Program Manual.
- Applicable minimum equipment efficiency standards for the program have been used in calculating Demand and Energy Reduction.

Willful misrepresentation of information contained in this proposal will be considered a basis for disqualification.

Form completed by: John Doe

Signature: John Doe Date: 4/1/04

Title: Plant Engineer

Phone: 555-1234

Bidder Name: (---Not necessary for self-sponsored projects---)

Project Name: _____

Estimated electric energy savings (kWh): _____

Estimated natural gas savings (therms) _____

By signing this document, you, the Host Customer, acknowledge that _____ has discussed with you or others within your organization the possible implementation of the demand side management (DSM) measures identified above within your facility or facilities. Your signature also indicates that if _____ is successful in obtaining financial incentives from MidAmerican,

1. Your company intends to move forward with the installation of these measures.
2. All installation and/or construction activities are expected to be commenced and completed no later than the deadlines established for this bid cycle. Deadlines are defined in the Program Manual.
3. You have the necessary authorization within your firm to approve the installation of these measures.
4. You agree to allow MidAmerican to verify the savings achieved as a result of the installed measures by providing reasonable access during normal business hours to inspect the DSM measures and associated records through Dec. 31, 2006. MidAmerican's review or inspection of any DSM measures will not constitute any representation as to the technical or economic quality of the DSM measures. MidAmerican, its officers, employees and contractors will not be liable for the performance of these measures. MidAmerican will not release any proprietary information about your business without your permission.

If you have any questions, please contact the Efficiency Bid Program Administrator at (608) 246-0535 or your MidAmerican energy consultant.

Name (printed): _____

Signature: _____ Date: _____

Title: _____

Facility Address(es): _____

Warehouse A Lighting

Description: Warehouse A is currently lit by 112 - 400 W metal halide HID lights. The lights are configured in 8 rows of 14 fixtures. The metal halide HID lighting will be replaced with high-bay fluorescent lighting on a one-to-one basis. Example, Inc. is using internal labor to install the fixtures, thus no labor is included in the project cost.

Existing System:

Total Wattage per Fixture: 465 Watts

Total System Demand: $465 \text{ W} * (1 \text{ kW}/1000 \text{ W}) * 112 \text{ fixtures} = 52.08 \text{ kW}$

Operating Hours: 8,760 hours per year

Energy Consumption: $52.08 \text{ kW} * 8,760 \text{ hours} = 456,221 \text{ kWh}$

Proposed System:

Total Wattage per Fixture: 224 Watts

Total System Demand: $224 \text{ W} * (1 \text{ kW}/1000 \text{ W}) * 112 \text{ fixtures} = 25.09 \text{ kW}$

Operating Hours: 8,760 hours per year

Energy Consumption: $25.09 \text{ kW} * 8,760 \text{ hours} = 219,788 \text{ kWh}$

Demand Savings:

Demand Savings = Baseline Demand – Proposed Demand

Demand Savings = $52.08 \text{ kW} - 25.09 \text{ kW} = 26.99 \text{ kW}$

Energy Savings:

Energy Savings = Baseline Energy Consumption – Proposed Energy Consumption

Energy Savings = $456,221 \text{ kWh} - 219,788 \text{ kWh} = 236,433 \text{ kWh}$

Process Water Heating Upgrade

Description: Brick manufacturing process requires supply of hot water to mix raw materials. Current system utilizes a steam boiler with a heat exchanger to produce the required hot water. Example, Inc. proposes to replace the boiler system with a direct contact hot water heater.

Process Requirements:

Process requires 200 GPM for 6 hours. The water is heated from the supply temperature of 55 F to 120 F. The clean-up crew utilizes 100 GPM at the same temperature for 2 hours per day.

Energy Savings:

The system operates for 6 hours a day for production year-round. Total production annual operating hours = $6 * 300 = 1,800$ hours. The additional 100 GPM is required 2 hours per day year-round = $2 * 300 = 600$ hours.

Energy Consumption

$200\text{GPM} * 60 \text{ min/hr} * 8.34 \text{ lb/gal} * 1 \text{ Btu/lbm-F} * (120 \text{ F} - 55 \text{ F}) = 6,505,200 \text{ Btu/hr PROCESS LOAD}$

$100\text{GPM} * 60 \text{ min/hr} * 8.34 \text{ lb/gal} * 1 \text{ Btu/lbm-F} * (120 \text{ F} - 55 \text{ F}) = 3,252,600 \text{ Btu/hr CLEAN UP LOAD}$

Total Annual Energy Load = $1,800 * 6,505,200 + 600 * 3,252,699 = 13,660.98 \text{ MMBtu}$

Boiler system has an AFUE of 73 percent thus total baseline consumption is: $13,660.98 / 0.73 = 18,713.67 \text{ MMBtu}$

The Direct Contact Water Heater has an AFUE of 95 percent thus total energy is: $13,660.98 / 0.95 = 14,379.98$

Total Savings = $18,713.67 - 14,379.98 = 4,333.69 \text{ MMBtu} = 43,337 \text{ Therms}$

Chiller Upgrade

- Operating Schedule: **6:30 a.m. to 7:30 p.m. Mon. through Fri.**
- Sequence of Operation and Control Set Points: **CHWS 44F, CWS 78F**
- Model and Serial Number: **Existing Chiller: PCV-10**
Proposed Chiller:RTHC-1
- Cooling Capacity: **Existing = 250 tons**
Proposed = 250 tons
- Nameplate Efficiency: **Baseline Chiller Efficiency¹: 4.2 COP (0.837 kW/ton)**
Post-Retrofit Chiller Efficiency: 6.0 COP (0.583 kW/ton)
- Nameplate Data: **See attached cut sheets**
- Design Temperatures and Loads with Supporting Engineering Calculations:
See attached trend logs from EMCS.
Estimated Load during Peak Period¹: 198 tons
- Manufacturer’s Performance Information: **See attached cut sheets**
- Site Plans: **See attached**

Savings Equation:

$$kWh_{savings} = \sum_n \left(kWh_{post,n} * \left(\frac{COP_{new}}{COP_{baseline}} - 1 \right) \right) = 11,848 \text{ kWh}$$

$$Project \ Target \ Demand \ Reduction = \frac{kWh_{savings}}{T} = 11,848 \text{ kWh}/260 \text{ hrs} = 45.6 \text{ kW}$$

$$Annual \ Energy \ Savings: 45.6 \text{ kW} * 3511 \text{ hours} = 160,101 \text{ kWh}$$

Estimated kWh_{post}=198tons*0.537tons*260 hours
 260 hours = Number of hours in summer peak period.

COP_{new}=6.0 COP

COP_{baseline}=4.2 COP

Estimated number of operating hours: 3511 hours

¹Based upon trended data from EMCS during summer of 2001.