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By Electronic Filing

Patricia Van Gerpen
Executive Director
South Dakota Public Utilities Commission
500 East Capitol Avenue
Pierre, South Dakota 57501-5070

Re: In the Matter of the Consideration of the New PURPA Standards
Docket No. EL-08-028

Dear Ms. Van Gerpen:

Enclosed for filing, please find MidAmerican Energy Company's (MidAmerican) comments in Docket No. EL08-028. MidAmerican appreciates the opportunity to submit comments and responses to Staff's questions regarding to the new PURPA standards presented in the Energy Independence and Security Act of 2007. MidAmerican representatives will be made available to answer any additional questions or to provide any additional information that the Commission or Commission Staff may have in regards to the new PURPA standards presented in the Energy Independence and Security Act of 2007.

Sincerely,

Enclosures

Certificate of Service

The undersigned does certify that the foregoing Petition to Intervene has been served this day upon the following in accordance with the rules of the Public Utilities Commission.

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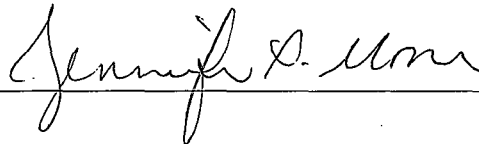
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Dated at Davenport, Iowa, this 19th day of June, 2009.



**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA**

**IN THE MATTER OF THE CONSIDERATION)
OF THE NEW PURPA STANDARDS)**

Docket No. EL08-028

**COMMENTS
OF
MIDAMERICAN ENERGY COMPANY**

Pursuant to the South Dakota Public Utilities Commission's (Commission) Order for and Notice of Procedural Schedule and Hearing in this matter issued on March 9, 2009 and Commission Staff's subsequent issuance of questions on April 29, 2009, MidAmerican Energy Company ("MidAmerican") hereby submits its Comments in this proceeding, and in support of its Comments, MidAmerican states as follows:

Background

On December 19, 2007, the President signed the Energy Independence and Security Act of 2007 (EISA) into law. The Act adds four new federal standards to the Public Utility Regulatory Policies Act of 1978 (PURPA) for state commissions and utilities to consider. The standards are (1) Integrated Resource Planning; (2) Rate Design Modification to Promote Energy Efficiency Investments; (3) Consideration of Smart Grid Investments; and (4) Smart Grid Information.

The Commission commenced this proceeding to consider the four new PURPA standards at its November 25, 2008, meeting. The Commission unanimously voted to open a docket and complete its consideration by December 19, 2009, and set an intervention deadline of December 31, 2008.

At its January 27, 2009, meeting, the Commission granted intervention to Montana-Dakota

Unities Company, Otter Tail Power Company, Xcel Energy, NorthWestern Energy, Black Hills Power, and MidAmerican. The Commission set forth its procedural schedule on March 9, 2009, wherein utilities are to submit direct testimony by June 19, 2009, and Commission Staff would file direct testimony on August 14, 2009, with utilities providing reply testimony on September 4, 2009. Hearings are to be held on September 22 and 23, 2009. The issue at hearing is whether the Commission should implement the four new federal standards.

On April 29, 2009, the Commission Staff clarified that parties were not required to file "Direct Testimony" in the normal question/answer format. Additionally, Commission Staff provided questions for the parties to answer regarding the PURPA/EISA standards. MidAmerican's Comments address the general PURPA/EISA standards and incorporate its responses to Commission Staff questions within the comments below.

Comments

MidAmerican is a multi-jurisdictional public utility providing natural gas and electric service to customers in the states of Iowa, Illinois, Nebraska and South Dakota. Pursuant to the Commission's directive, MidAmerican addresses each of the standards below to assist the Commission with its consideration of the EISA PURPA standards.

A. Integrated Resource Planning

Section 532 of EISA amends PURPA 111(d)(16) by adding a new standard that requires consideration of "Integrated Resource Planning" for electric utilities. The new standard provides:

- (16) INTEGRATED RESOURCE PLANNING. – Each electric utility shall -
- (A) integrate energy efficiency resources into utility, State, and regional plans;
- and
- (B) adopt policies establishing cost-effective energy efficiency as a priority resource.

PURPA Section 512.

MidAmerican notes that it recently began offering energy efficiency programs in its South Dakota service territory. MidAmerican also offers energy efficiency programs in Iowa and Illinois. MidAmerican does not go through a formal integrated resource planning (IRP) process in any of the jurisdictions it serves; however, MidAmerican does consider its energy efficiency resources as a priority resource in its system wide resource planning. As explained further in response to the Commission Staff questions, MidAmerican does not believe it is necessary for the Commission to adopt a formal IRP process to encourage cost-effective energy efficiency programs as a priority resource as many utilities such as MidAmerican use energy efficiency as a priority resource with out using a formal IRP process.

Below please find MidAmerican's responses to Commission Staff questions relating to IRP:

1. Are you currently required to go through an IRP process in any of your regulated jurisdictions?

MidAmerican is not required to conduct a formal IRP process in any of its jurisdictions; however, Iowa requires a resource planning process that functions similarly to the IRP process. Iowa examines integrated resource planning standards in the context of the five-year energy efficiency plans the Iowa utilities file with the Iowa Utilities Board and in the context of resource additions in applications for declaration of ratemaking principles.

If yes:

a. Which jurisdiction(s)?

Iowa.

b. How long has this been required?

The resource planning process utilized for energy efficiency has been in place since Iowa commenced rulemaking for PURPA in the late 1980s. The Iowa legislature also adopted policies establishing cost-effective energy efficiency as a priority resource in Iowa when it enacted House File 577. House File 577 amended Iowa Code section 476.53 (2009) to allow rate-regulated public utilities planning to construct or lease generating plants, that meet certain criteria, to request the Iowa Utilities Board to specify in advance the ratemaking principles that will apply when the costs of the facility are included in regulated electric rates.

Iowa Code §476.53(3)(c) (2009) explicitly charges the Iowa Utilities Board with making two findings when determining the appropriate ratemaking principles applicable to a given generating facility: (1) that the utility has in effect a Board-approved energy efficiency plan as required under Iowa Code §476.6 (16) (2009); and (2) that the utility has considered other sources for long-term electric supply and determined that the proposed facility is reasonable when compared to the other feasible alternative sources of supply.

Additionally, subrule 41.3(7) of the Iowa Administrative Code requires that Iowa utilities consider energy efficiency as part of the justification for new generation resource additions. As part of the approval process for new resource additions, the Board has the opportunity to review the company's compliance with energy efficiency requirements. Furthermore, the company incorporates energy efficiency

into its consideration of other long-term supply options in response to subrule 41.3(6). Accordingly, the Board's review of ratemaking principles for new generation places energy efficiency as a priority resource for Iowa utilities. The requirement for new generation was implemented in 2001.

c. Explain the input process.

The input process for energy efficiency is based on the latest company resource plan which is subsequently updated with the energy efficiency plan impact projections.

MidAmerican develops avoided costs for the energy efficiency plans utilizing current committed and expected generation in its modeling. Sections 35.8(1)“a”-“c”; 35.9 (1); 35.9(3); 35.9(4); 35.9(5); 35.9(6); and 35.9(7)¹ of the Iowa Administrative Code already require Iowa utilities to integrate energy efficiency resources into utility, State and regional plans.

Resource addition filings incorporate energy efficiency and demand-side impacts into the modeling process by adjusting energy requirements and peak demand loads for the related forecasted impacts. Capacity planning and energy efficiency are integrated through this iterative process.

The planning process involves the use of several models including Strategist, a resource optimization expansion model; PROMOD IV, a generation dispatch

¹ 199 IAC 35.8(1)“a”-“c” Assessment of Energy and Capacity Savings Potential in Iowa;
199 IAC 35.9 (1) - Electric Load Forecast;
199 IAC 35.9(3) -Existing Electric Capacity and Firm Commitments;
199 IAC 35.9(4) - Electric Capacity Surpluses and Shortfalls;
199 IAC 35.9(5) - Electric Capacity Outside the Utility's System;

model; MarketPower, an electric price forecast model; IPM, an environmental model developed by ICF Consulting that models federal, regional and state environmental policies, state (and if required national) renewable portfolio standards, and emission control technologies available to meet requirements; and an internal economic analysis model. The following is a general description of key inputs (the list of inputs is not meant to be exhaustive) into models:

- i. Load information including MidAmerican's peak demand, sales, and energy efficiency forecasts and an hourly load profile;
- ii. Generation parameters including capacities (minimum and maximum), heat rates, maintenance periods, forced outage rates, emission rates, minimum run times, variable operation and maintenance cost and startup costs;
- iii. New generation costs and operating parameters including capital costs, cashflow of construction costs, fixed operating and maintenance costs, financing requirements (return on equity, debt interest, capitalization ratio, etc.), initial date technology is available and the operating parameters listed in generation parameters above;
- iv. Fuel price forecasts for coal, natural gas, petroleum and nuclear;
- v. Firm purchases and sales;
- vi. Operating profiles related to wind, hydro, solar and gas-fired generation;
- vii. Emission cost forecasts for sodium dioxide, nitrous oxides and carbon dioxide (mercury controls are assumed to be best available control

technology, and therefore, do not have allowance costs) are produced from IPM®;

- viii. Power interchange includes limits for power transfers among defined areas (zones) or limits on purchases or sales to MidAmerican; further, transmission fees and losses are included in some upstream models ^{such} as the electric price forecast model and the environmental model;
- ix. Electric price forecast is developed by MarketPower® for input to Strategist® and PROMOD IV®;
- x. Financial inputs including return on equity, debt interest, capitalization ratios, incentives (e.g., production tax credits) income and property taxes, depreciation and inflation; and
- xi. Dispatch strategies including operating status (e.g., must run) and dispatch price markup.

d. How often is the plan revised/reviewed?

The plan is reviewed and partially or fully revised each time the company updates its financial plan, submits a request for ratemaking principles associated with capacity additions and when filing a new energy efficiency plan.

e. Historically, have you followed the resulting plans?

Yes, for near-term generation additions or energy efficiency plans. Longer-term projects often must be revised due to new information available such as new policies (carbon, other emissions, renewable portfolio standards) either directly affecting the

company or indirectly via decisions by other utilities in response to the policies; generation additions by other parties; fuel price changes, transmission congestion/availability and so on.

f. Explain how energy efficiency resources have been integrated into this process.

See response to item c.

g. Please provide an analysis of the costs and benefits associated with the current process.

The primary benefit of the current process is that it allows MidAmerican the flexibility to make modifications as necessary to manage its business and to respond to the many uncertainties that exist in today's environment. The cost is more difficult to quantify as the Company has not performed a cost/benefit analysis for an IRP process.

2. Were you previously required to go through an IRP process in another jurisdiction that [no] longer requires it?

Yes, Illinois required MidAmerican to submit a Least Cost Plan, which is similar to an IRP, every three years until 1997 when the least cost planning statute was repealed due to electric deregulation in Illinois.

If yes:

a. Which jurisdiction(s)?

Illinois.

b. Explain the input process.

The input process was a simplified version of MidAmerican's current planning

process in that an electric price forecast model was not generally available and the environmental regulations were much more limited in scope. Otherwise, the inputs included load information, generation parameters, new generation costs and operating parameters, fuel price forecasts, firm purchases and sales data, and off-system interchange.

c. Historically, how close did you follow the resulting plans?

The studies were completed for a predecessor company of MidAmerican, Iowa-Illinois Gas & Electric Company, during a period when they were experiencing surplus capacity; hence, the plans were typically longer-term and not applicable to MidAmerican.

d. How often was the plan revised/reviewed?

The plan was updated every 3 years with the final update completed in 1995.

e. Explain how energy efficiency resources were integrated into the process.

As part of the least cost planning requirements, utilities could offer energy efficiency programs. The Illinois Commerce Commission would review the energy efficiency plans in the context of the Least Cost Plan and either reject or accept the energy efficiency programs. MidAmerican's predecessor company, Iowa Illinois Gas and Electric Company, did offer a few energy efficiency pilot programs in Illinois, *see* Illinois Commerce Commission Docket Nos. 90-0062; 91-0050 and 92-0272.

f. Please provide an analysis of the costs and benefits associated with the current process.

As noted above, Illinois discontinued its least cost planning process. While

MidAmerican does not provide any IRP to the Illinois Commerce Commission, MidAmerican does provide energy efficiency programs pursuant to Section 8-408 of the Illinois Public Utilities Act. Pursuant to that provision, the Illinois Commerce Commission's finding of cost-effectiveness, or reasonableness in the case of the low-income program, is to be based upon presentation that the regulatory agency in an adjacent state has already made that determination. 220 ILCS 5/8-408. In the case for MidAmerican, it offers energy efficiency programs in Iowa, so that if the Iowa Utilities Board determines that MidAmerican's energy efficiency programs in Iowa are cost effective, the Illinois Commerce Commission may find that MidAmerican's energy efficiency programs are cost effective. For further details regarding the Iowa requirements, see the responses in question 1.

g. Why was the IRP discontinued?

Illinois enacted legislation to deregulate the electric service; thus allowing competition as part of its electric restructuring plan beginning in 1997.

h. How did this decision impact your operations?

The decision to discontinue the IRP requirement in Illinois had little to no impact on MidAmerican's operations since MidAmerican is a multistate utility with a majority of its operations in Iowa.

3. Should the commission adopt an IRP process? Explain.

MidAmerican does not believe it is necessary that the Commission adopt an IRP process since an IRP process is not necessary to encourage utilities to use energy efficiency as a priority resource. MidAmerican is able to offer effective energy efficiency programs without

having to go through a formal IRP process in the various jurisdictions it serves.

The Commission already encourages the filing of energy efficiency plans. Consequently, it would not be necessary for the Commission to adopt new IRP standards. If the Commission determines a formal IRP process is warranted, the Commission should consider what the utilities are doing in other states and also consider exempting companies who already offer energy efficiency programs and have some kind of IRP reviews in other states.

4. If the commission adopted an IRP process in South Dakota:

a. How should energy efficiency resources be integrated?

MidAmerican believes the current process of integrating energy efficiency into the planning process as adopted in Iowa is adequate (See the response to 1 c.).

b. How often should the plan be revised/reviewed?

A two-year cycle should be the minimum period given the required effort to develop the resource plan, receive comments and approvals.

c. How would this benefit you?

MidAmerican does not see an additional benefit over the current planning process.

d. How would you be negatively affected?

MidAmerican would be negatively affected because its electric sales in South Dakota are only 1 percent of its total electric sales. Adding such a requirement that would drive resource planning based upon such a small portion of electric load would be overly burdensome and would derive little benefit.

B. Rate Design Modification to Promote Energy Efficiency Investments

Section 532 of EISA amends PURPA 111(d)(17) by adding a new standard that requires consideration of “Rate Design Modifications to Promote Energy Efficiency Investments.” The amendment provides:

(17) RATE DESIGN MODIFICATIONS TO PROMOTE ENERGY EFFICIENCY

(A) IN GENERAL.—The rates allowed to be charged by any electric utility shall—

- (i) align utility incentives with the delivery of cost-effective energy efficiency; and
- (ii) promote energy efficiency investments.

(B) POLICY OPTIONS.—In complying with subparagraph (A), each State regulatory authority and each nonregulated utility shall consider—

- (i) removing the throughput incentive and other regulatory and management disincentives to energy efficiency;
- (ii) providing utility incentives for the successful management of energy efficiency programs;
- (iii) including the impact on adoption of energy efficiency as 1 of the goals of retail rate design, recognizing that energy efficiency must be balanced with other objectives;
- (iv) adopting rate designs that encourage energy efficiency for each customer class;
- (v) allowing timely recovery of energy efficiency related costs; and
- (vi) offering home energy audits, offering demand response programs, publicizing the financial and environmental benefits associated with making home energy efficiency improvements, and educating homeowners about all existing Federal and State incentives, including the availability of low-cost loans, that make energy efficiency improvements more affordable.

PURPA Section 512.

MidAmerican generally supports adoption of rate design modification policies to promote energy efficiency since energy efficiency will play a very important role in meeting future resource needs. Although MidAmerican’s South Dakota energy efficiency plan already includes timely cost recovery of energy efficiency costs and requirements to offer a wide array of energy efficiency

programs, the Commission may want to consider other policy changes to move energy efficiency to an even higher level.

For example, adopting rate designs that reduce or eliminate financial harm to utilities from declining sales and provision of explicit incentives to utilities for successful management of energy efficiency programs will encourage utilities to make energy efficiency an integral part of their business. To date electric utility earnings have not been impacted by implementation of energy efficiency programs to the same degree as those of gas utilities because added use related to new electronic devices has outstripped usage reductions resulting from energy efficiency programs. However, this could change as energy efficiency efforts are increased.

In order to help ensure the continuing financial health of utilities implementing energy efficiency it will be important to ensure that utility fixed costs continue to be recovered despite declines in sales. Providing some type of incentive for successful management of energy efficiency programs also helps establish these programs as an integral part of the utility business. Like other parts of the business, successful energy efficiency program management then provides an opportunity for profit.

MidAmerican generally supports the adoption of rate designs that will effectively encourage energy efficiency. However, it is important to recognize that rate designs are only effective in encouraging energy efficiency if customers have sufficient pricing and usage information and the tools to respond to that information. Before decisions are made regarding rate designs related to energy efficiency, the Commission should carefully consider whether the benefits of customer usage changes are likely to outweigh the costs of providing the necessary information and controls. As part of its consideration, the Commission should also examine the costs and benefits of other potential

options for improving efficiency, such as direct load control.

Below please find MidAmerican's responses to Commission Staff questions relating to Rate Design:

- 1. If a federal or state energy efficiency resource standard is established, what is the best way to meet the target? Or will several programs need to be employed? If so, what are those programs?**

The best way to meet federal or state energy efficiency resource standards is conduct an assessment of energy and capacity savings potential for applicable fuels offered in the utility service territory. Based on results of the assessment, energy efficient measures can then be reviewed and bundled into appropriate program designs. Next, customer participation can be estimated for each program and costs for program design/development, administration, promotion and monitoring and evaluation can be projected. Finally, energy efficient measures can be bundled into cost effective programs for appropriate customer classes.

MidAmerican believes there is no "best practice" available to determine the appropriate level of spending with regard to energy efficiency plans and programs. In the late eighties and early nineties, spending targets set as a percentage of utility gross revenues were typical, but gradually have been abandoned because of the recognition that spending based on percentages or minimum spending targets, in nearly all cases, is purely arbitrary.

Energy efficiency plans usually include a portfolio of core programs including energy audit programs, applicable equipment rebate programs to complement the energy audit programs, custom programs for equipment that doesn't fit neatly into prescriptive equipment

rebate programs, low income weatherization assistance and, depending on energy codes adopted within the territory, new construction programs.

2. **Some states have created an independent organization, funded through a charge to customers based on a percentage of sales, which develops and monitors energy efficiency programs. What are your thoughts on an independent organization administering energy efficiency programs? What percent of sales should customers contribute if that benchmark is employed? How would large differences among utilities' sales affect programs? Should there be a baseline standard for programs and then an "adder" based on percentage of revenue?**

There are different models for delivering energy efficiency programs. In some states, such as Vermont or Oregon, an independent third party administrator is responsible for delivery of energy efficiency services, separate from the utility. In others, the state delivers the programs. The majority of states deliver energy efficiency programs through the utilities.

There are specific benefits associated with delivering energy efficiency programs through utilities. The utility has an established relationship with the customer. There is evidence that customers look first to their utility for information about efficiency and rely on their utility to provide credible information. Second, utilities have the system support to deliver efficiency. This includes everything from billing to customer service to account managers who have relationships with key customers. Efficiency information and opportunities are delivered through each of these avenues. Finally, energy efficiency and demand side management needs to be integrated with supply options. For the utility to

consider demand side options on par with supply side alternatives, it must have control over their administration and understand their value in meeting load.

MidAmerican has an almost 20 year history in delivering energy efficiency to its customers and wishes to remain in that role. J.D. Power and Associates customer satisfaction surveys show that energy efficiency information, services and programs are a major contributor toward customer satisfaction, something we value and take very seriously.

3. What alternative mechanisms besides decoupling would promote energy efficiency investments? How do they compare to decoupling?

Decoupling, which separates the level of utility revenue from the amount of kWh sold does not promote energy efficiency investments. It simply removes the disincentive for a utility to pursue energy efficiency by eliminating the impact of resulting reductions in sales. There are several options other than decoupling that improve utility incentives to promote energy efficiency:

- Inclusion of the fixed costs of providing service to customers in the fixed monthly basic service charge;
- Granting of utility incentives for successful management of energy efficiency programs, such as those approved by the South Dakota Commission;
- Inclusion of pro forma adjustments in rate cases to recognize the expected impact of use per customer reductions resulting from energy efficiency programs; and
- More frequent rate cases.

While decoupling likely provides the best assurance that utilities are compensated for usage reductions related to energy efficiency programs, it is also the most complicated

solution, may be confusing to customers, and could result in customer backlash related to energy efficiency if the perception is that rates are being immediately adjusted to compensate for any usage reductions.

Perhaps the best solution is a combination of the other options. Movement of all fixed costs to the fixed monthly basic service charge also provides good assurance of lost margin recovery. However, it may be impractical to move all fixed costs to the basic service charge because of substantial impacts to small-use customers.

An increase in the fixed costs included in the basic service charge could be effectively combined with utility incentives, pro forma adjustments or more frequent rate cases. By reducing the amount of fixed cost recovery lost, the magnitude of incentives or pro forma adjustments would be decreased or the frequency of rate cases reduced.

4. Energy efficiency can occur in a number of ways including utility programs and improvements made solely by customers. How should credit be given appropriately for efficiency improvements? How can such credit be determined? Without such a determination can the commission treat all parties fairly?

There are two parts to every energy efficiency investment, whether the investment is made via utility programs or made solely by customers. In the near term, there is the up-front cost of acquiring qualifying high efficiency equipment (e.g., a new, high efficiency natural gas-fired furnace or water heater or a new high efficiency motor or lighting system). For most customers, the key decision is determining whether purchasing high efficiency equipment is economically feasible or purchasing standard efficient equipment is the only practical alternative. A rebate covering a portion or all of the incremental cost of high efficiency

equipment has proven to be most effective in overcoming the barrier of higher initial cost for high efficiency equipment.

For some customers, making energy efficient investments is a fundamental part of their decision-making process. These customers tend to focus on the second part of energy efficiency investments, the long-term savings associated with high efficiency equipment/systems. Focusing on the long-term cost savings of energy efficient equipment/systems, especially when considered over the entire life of the equipment, can equal or easily exceed the incremental up-front cost between standard and high efficiency equipment/systems.

Customers motivated by long-term cost savings may not need to be "given credit" (i.e., in a financial sense) for making energy efficiency improvements. They recognize without having to be incented that an investment in high efficiency equipment/systems is always a good decision. Maximizing long-term benefits, whether as a single residential customer, commercial customer or industrial entity is a basic tenet of a modern economic system. Utility energy efficiency rebates are intended to overcome the financial barrier perceived by many customers that lead them to focus on the initial cost of an investment. Customer education, especially if continued over an extended period of time, will help more and more customers focus on the long-term (life cycle) benefits of investing in high efficiency equipment/systems. In other words, customers who implement energy efficiency improvements without influence/aid from utility energy efficiency programs may not receive an up-front rebate, but receive long-term cost savings on the utility bills, which is a form of "credit" that extends for the life of energy efficiency measure.

5. What forum should be used to adjust rates for new consumption patterns?

MidAmerican favors the inclusion of a pro forma adjustment in rate cases to adjust rates for new consumption patterns, particularly if coupled with movement of more fixed costs into the basic service charge. This would allow for a single adjustment to rates that would reasonably compensate a utility for lost margins expected to be experienced before the next rate case filing. In this way the adjustment would be virtually transparent to customers, as it would occur as part of an overall adjustment to their rates.

6. What methods can be used to determine if a sales decline was due to energy efficiency or other possible factors (weather, economy, loss of large customer, etc.)?

The best way to estimate the sales declines related to energy efficiency is to directly calculate the impacts based on the efficiency measures actually installed as part of energy efficiency programs. Good monitoring and evaluation practices should help ensure that these estimates are reasonably accurate.

7. Can a decoupled rate promote electricity usage efficiency, or perhaps reduce electricity usage through a transfer of energy usage from the customer to another entity, or from fuel switching? In effect could rate design induce greater overall energy usage even though electricity usage is reduced?

Rate decoupling itself does not promote electricity usage efficiency. Instead it removes a potential disincentive for utilities to promote energy efficiency. Only to the extent that decoupling increases per kWh electricity rates in response to losses in sales might it tend to reduce customer electricity usage. It is possible that increases in electric rates would cause customers to shift usage to other entities or to switch to alternative fuels. However, the

increases associated with decoupling would probably be relatively small, making it unlikely that they alone would cause these outcomes.

- 8. Describe in detail how the Commission should proceed in reviewing (i) through (vi) below, including any options for doing so. What questions should be asked in each category to obtain information which should be part of the Commission's consideration? Be specific for each category.**

(B) POLICY OPTIONS.—In complying with subparagraph (A), each State regulatory authority and each nonregulated utility shall consider—

(i) removing the throughput incentive and other regulatory and management disincentives to energy efficiency;

(ii) providing utility incentives for the successful management of energy efficiency programs;

(iii) including the impact on adoption of energy efficiency as 1 of the goals of retail rate design, recognizing that energy efficiency must be balanced with other objectives;

(iv) adopting rate designs that encourage energy efficiency for each customer class;

(v) allowing timely recovery of energy efficiency related costs; and

(vi) offering home energy audits, offering demand response programs, publicizing the financial and environmental benefits associated with making home energy efficiency improvements, and educating homeowners about all existing Federal and State incentives, including the availability of low-cost

loans, that make energy efficiency improvements more affordable.

POLICY OPTIONS

- (i) The Commission has already asked the pertinent questions to consider this category (Questions 3, 5, 6 and 7).
- (ii) The Commission has already allowed incentives for the successful management of energy efficiency programs. It need not adopt the standard.
- (iii) While MidAmerican believes the Commission should consider energy efficiency goals as one factor in establishing retail rate design, the Commission need not adopt the standard in order to do so. The Commission already has that authority.
- (iv) See answer to (iii).
- (v) The Commission, in allowing for contemporaneous energy efficiency cost recovery in MidAmerican's energy efficiency plan, has already established this policy. It need not adopt the standard.
- (vi) MidAmerican's new energy efficiency plan in South Dakota, implemented on May 1, 2009, includes residential and small commercial energy audit programs, residential and nonresidential equipment rebate programs and a customized program (for energy-using equipment/systems that do not fit neatly into one of the prescriptive rebate programs). These programs complement the energy audit programs, low income weatherization assistance and direct control of residential central air conditioners (broadly defined as demand response). These programs represent a comprehensive portfolio of program opportunities for the Company's South Dakota customers. MidAmerican's information-based marketing effort regarding its new South Dakota programs informs customers about: (1) the benefits of

making energy efficiency improvements; and (2) the existence of MidAmerican's new programs and how to obtain additional information including how to participate in the programs. Additionally, MidAmerican is informing customers about federal tax credits currently available for energy efficiency improvements (e.g., current federal tax credits 30 percent of the cost of the improvement up to \$1,500, a very attractive incentive for customers) on top of MidAmerican's program rebates.

In addition to the obvious financial benefits, MidAmerican's filed plan, energy efficiency information provided on the Company's Web site, and at trade ally locations, informs customers of the positive environmental benefits of making energy efficiency improvements. Considering the flexibility the Commission has already shown regarding development and implementation of energy efficiency programs by several utilities within the state, the Commission need not adopt the standard.

C. Consideration of Smart Grid Investments

The smart grid title of Section 1307 of EISA amends PURPA by adding two new standards that require consideration of "Smart Grid Investments and Smart Grid Information." In this section, MidAmerican will provide information regarding Smart Grid Investments and provide information regarding Smart Grid information in Section D below. Section 1307 of PURPA amended Section 111(d) of PURPA by providing the following:

(16) CONSIDERATION OF SMART GRID INVESTMENTS.—

(A) IN GENERAL.—Each State shall consider requiring that, prior to undertaking investments in nonadvanced grid technologies, an electric utility of the State demonstrate to the State that the electric utility considered an investment in a qualified smart grid system based on appropriate factors, including—

- (i) total costs;
- (ii) cost-effectiveness;
- (iii) improved reliability;
- (iv) security;
- (v) system performance; and
- (vi) societal benefit.

(B) RATE RECOVERY.—Each State shall consider authorizing each electric utility of the State to recover from ratepayers any capital, operating expenditure, or other costs of the electric utility relating to the deployment of a qualified smart grid system, including a reasonable rate of return on the capital expenditures of the electric utility for the deployment of the qualified smart grid system.

(C) OBSOLETE EQUIPMENT.—Each State shall consider authorizing any electric utility or other party of the State to deploy a qualified smart grid system to recover in a timely manner the remaining book-value costs of any equipment rendered obsolete by the deployment of the qualified smart grid system, based on the remaining depreciable life of the obsolete equipment.

PURPA Section 1307; *see also* Order at footnote 3, page 2.

While MidAmerican generally supports Commission actions to encourage utilities to take cost-effective steps to modernize their transmission and distribution systems, MidAmerican, however, does not support the Smart Grid Investments standard, as written. MidAmerican has the following four concerns about part (A) of the PURPA standard.

First, the standard does not provide certainty as to what existing utility systems would be included in “nonadvanced grid technologies.” Utilities may delay or slow down the appropriate replacement of existing systems where smart grid alternatives are clearly not yet viable because of the proposed studies described in Section A. The resulting use of systems beyond their normal effective life could decrease reliability and service to customers. In addition to project delays, the studies would also result in increased costs and time burden to the utilities, the Commission, and Commission Staff.

Second, the standard likewise does not provide a definition of “qualified smart grid system.” This could make implementation of the standard unnecessarily contentious. MidAmerican believes that many people fail to recognize that the term “smart grid” incorporates much more than smart meters. In order to ensure recognition that the term may apply to a wide variety of utility equipment and practices, MidAmerican suggests that, if the Commission adopts any rules related to smart grid investment, that it incorporate a clear definition into those rules. Perhaps the Commission could use the ten items characterizing a smart grid as listed in Section 1301 of the EISA as a starting point.

Third, the standard could be read to require a complex justification for all grid investments, no matter how small or mundane, that must be preapproved by the Commission. This process would create overly burdensome requirements for utilities to make investment upgrades to their electric systems. MidAmerican does not believe that this is the intent of the amendment and does not recommend the Commission consider such a process. Moreover, the available equipment and systems are in the early stages of development, and standards and compatibility issues have not been fully addressed.

Fourth, the standard contains a preapproval process. MidAmerican believes that preapproval of smart grid investments will be extremely important, since those investments will include substantially greater risk than more traditional utility projects.

If the Commission wishes to encourage early adoption of smart grid technologies, it is essential that provisions also be adopted for recovery of both the cost of smart grid equipment and any related costs for obsolescence in order to help eliminate utility barriers to cost-effective investment in smart grid technologies. Experience has shown that providing utilities with incentives rather than mandates, is a more effective tool to achieve the desired intent. If development of smart

grid systems and/or the customer programs that result from them is the intent, then the Commission should consider incentive mechanisms to foster the development of smart grid technology rather than mandates. A good incentive for creating a smart grid would be to allow the use of a rider mechanism that allows quicker recovery of smart grid expenditures outside of a rate case and includes provisions for the recovery of stranded costs of obsolete equipment. This is the most prudent approach with smart grid technology evolving and maturing.

D. Smart Grid Information

Section 1307 of PURPA amended Section 111(d) of PURPA by providing the following:

(17) SMART GRID INFORMATION.—

(A) STANDARD.—All electricity purchasers shall be provided direct access, in written or electronic machine-readable form as appropriate, to information from their electricity provider as provided in subparagraph (B).

(B) INFORMATION.—Information provided under this section, to the extent practicable, shall include:

(i) PRICES.—Purchasers and other interested persons shall be provided with information on—

- (I) time-based electricity prices in the wholesale electricity market; and
- (II) time-based electricity retail prices or rates that are available to the purchasers.

(ii) USAGE.—Purchasers shall be provided with the number of electricity units, expressed in kWh, purchased by them.

(iii) INTERVALS AND PROJECTIONS.—Updates of information on prices and usage shall be offered on not less than a daily basis, shall include hourly price and use information, where available, and shall include a day-ahead projection of such price information to the extent available.

(iv) SOURCES.—Purchasers and other interested persons shall be provided annually with written information on the sources of the power provided by the utility, to the extent it can be determined, by type of generation, including greenhouse gas emissions associated with each type of generation, for intervals during which such information is available on a cost-effective basis.

(C) ACCESS.—Purchasers shall be able to access their own information at any time through the Internet and on other means of communication elected by that utility for Smart Grid applications. Other interested persons shall be able to access information not specific to any purchaser through the Internet. Information specific to any purchaser shall be provided solely to that purchaser.

PURPA Section 1307; *see also* Order at footnote 4, page 2.

While MidAmerican generally supports Commission adoption of policies that encourage consumers to be more energy efficient, MidAmerican does not support adopting a standard that requires providing information when it is not clear that the cost of providing such information would be less than the benefit received by customers. The current Smart Grid Information standards, as written, do not take into consideration the costs or the benefits of providing customers with specific information.

Pricing

For example, providing customers with real-time pricing information may not impact consumer behavior because the retail electricity market is not competitive in South Dakota. Consequently, it is unlikely customers will realize much value from knowledge of wholesale market prices, as contemplated in subpart (B)(i)(I). MidAmerican customers with internet access already can view the time-based retail rates that are available to them on MidAmerican's web site.

Usage

MidAmerican's customers are already provided with the kWh they have purchased as part of their electricity bill as required by SD Admin. Rule 20:10:17:03.

Intervals and Projections

This standard presumes that providing extensive pricing and usage information to customers

will be the most cost-effective alternative to encourage efficient use of energy. MidAmerican does not believe the case for this has yet been proven. It may be that the simpler process of providing utility control over operation of certain customer appliances will be a more cost-effective option. If it is ultimately determined that provision of such extensive customer information is the most desirable course, the Commission can certainly require utilities to do so at that time. MidAmerican believes adoption of this standard would be premature at this time.

Sources

Information regarding MidAmerican's sources of generation is already provided to its customers on an annual basis through a bill insert.

Access

MidAmerican customers with internet access have the ability to view their monthly billing and usage information on MidAmerican's web site. If it is ultimately determined to be cost-effective to provide more extensive pricing and usage information to customers, provision of that information over the internet could also be required at that time.

In reviewing these standards, it is important for the Commission to consider the options electric customers currently have available to them. Moreover, the Commission needs to recognize that any additional requirements imposed on utilities may significantly increase costs. Therefore, the Commission should also weigh the additional costs with the benefits the technologies can bring before any additional requirements are adopted.

Below please find MidAmerican's responses to Commission Staff questions relating to Smart Grid:

- 1. What are your organization's goals relative to smart grid technology?**

MidAmerican is tracking the development of smart grid in the industry and will track the technologies implemented in the industry to help determine if there are cost effective technologies to implement in MidAmerican's system.

MidAmerican has no immediate plans to implement a smart grid system, so an overall smart grid plan has not been developed; however, MidAmerican's general goals for smart grid technology include implementing cost effective ways to:

- improve reliability;
- improve information gathering in order to plan, design, and operate the system better;
- expand demand side management options; and
- improve cooperation with regional groups in order to maintain a secure system.

2. What is the value of each smart grid goal to your utility?

- Improving reliability with smart grid would contribute with other MidAmerican processes to reduce outage duration, which would help meet our customer service goals.
- Improving information gathering would have a short-term effect in being able to identify system issues sooner such as low voltage and would have a long-term effect in the ability to plan capital improvements. These items will help us meet our operational excellence goals.
- Expanding demand side management options would affect our goals for customer satisfaction, operational excellence, and environment respect.

- Improving cooperation with regional groups would affect our goals related to regulatory integrity.

3. What is the value of each smart grid goal to your consumers?

See response to Question #2 above.

While the specific impacts to our customers will vary depending on a customer's energy needs, the general value of improved customer satisfaction will be felt by customers. A potential smart grid option is to supply real-time customer usage information that would enable a customer to adjust usage depending on price. To the extent consumers can make these usage adjustments, they would realize energy cost savings.

4. What smart grid technology does your organization see using to achieve its goals?

Since the concept of a smart grid system is relatively new, not all smart grid technologies are field proven or even developed, and the cost effectiveness of smart grid as a whole has not been verified. For these reasons, a smart grid plan has not been developed, so specific technologies have not been chosen.

In general, a digital communication system that reaches all levels of the system would be required as the backbone of a smart grid system. At the transmission level, increased implementation of digital line relays would improve identification of the faulted section during an outage, which would enable a faster return of the system to normal. At the distribution level, it is envisioned that a fault location system would utilize new or existing digital feeder relays and field devices to provide better and quicker identification of the faulted section, which would enable faster restoration. At the customer level, two-way

communications could be utilized to expand demand side management options and/or advance metering infrastructure.

5. What short term impacts do you see smart grid technology having on rates?

MidAmerican has no immediate plans to implement a smart grid system, so no impact on rates is expected.

6. What long term impacts do you see smart grid technology having on rates?

MidAmerican expects that a cost recovery mechanism will exist for smart grid technologies by the time the Company implements a smart grid system. Additionally, implementation of advanced metering would likely require changing the standard rates for customers from seasonal to time-based rates.

7. What types of rate design would you need to invest in smart grid technology?

In order to invest in smart grid technology, a rate design that enables faster recovery of the investment compared to traditional equipment is expected. This is because the lifespan of smart grid technologies is expected to be shorter given its electronic nature and expected advances in what the technology can do. It is expected that the rate design would cover an accelerated recovery of any applicable legacy systems.

Moreover, in order for an investment in advanced metering to be reasonable, it would be necessary to implement some type of time-based pricing on a wide scale. This could be traditional time of use, critical peak pricing, where a smaller number of high-priced periods are identified, or real time pricing.

8. How does the planned IEEE standard on smart grid impact your decision making on smart grid technology?

As discussed previously, since not all smart grid technologies are field proven or even developed, including the equipment standards and protocols, MidAmerican will be cautious and prudent with potential smart grid related expenditures to reduce the risk of compatibility issues.

9. What system benefits do you see from investing in smart grid technology, for example, shorter outages, etc.?

As discussed previously, MidAmerican would expect certain smart grid technologies to improve outage response and reduce outage duration. Certain smart grid technologies would also provide MidAmerican better system information to plan, design, and operate the system.

10. What options do you see to ensure interoperability?

Interoperability will always be an issue with legacy, current, and future systems. Reducing the risk of non-interoperability would be incorporated into the requests for proposals and purchase orders by requiring the equipment to meet whatever the latest IEEE standards. Adding robustness to the plan would also contribute to interoperability.

11. What time frame do you see for implementation of smart grid systems?

MidAmerican has no implementation schedule at this time. It is expected that MidAmerican would not proceed with significant investments until standards are developed. When an implementation begins, it is expected that implementation would be staged over several years.

12. What options do you see for preventing rapid obsolescence of smart grid investments?

This is similar to the interoperability issue as some obsolescence will be unavoidable. Reducing the risk of obsolescence would be incorporated into the requests for proposals and

purchase orders by requiring the equipment to meet whatever the latest IEEE standards are at the time. Adding robustness to the plan would also contribute to reducing obsolescence.

13. What costs do you see associated with the smart grid technologies you may invest in?

The costs associated with smart grid technologies would include investments in additional digital communication infrastructure, replacement of electromechanical relays with digital relays, additional field devices, computer hardware and software, and the labor and training required to install and maintain the facilities.

14. How do you plan to balance value against cost for each of your smart grid goals/investments?

Before a significant investment in smart grid would be completed, an analysis of the costs and benefits of smart grid applications would be completed that would consider multiple scenarios to develop a cost effective plan.

15. How will your smart grid investments be split among?

- a. metering
- b. automated switches
- c. substation controls

MidAmerican has no immediate plans to implement a smart grid system, so a position on these investment splits has not been developed.

16. Will you implement smart grid in other states you serve before or after South Dakota?

MidAmerican has no immediate plans to implement a smart grid system, so a position on this has not been developed. Given the service territory distribution among the states

MidAmerican serves, it is likely that smart grid implementations would occur in other states before South Dakota.

17. What impact will smart grid technology have on your portfolio of generation facilities, i.e., will the fuel sources shift, etc.?

Smart grid technology is not expected to have a significant effect on MidAmerican's portfolio of generation facilities.

18. How should investments made obsolete by smart grid technology be recovered by utilities?


If investments in smart grid technology are required by a regulatory body either directly or indirectly, then recovery of investments in equipment that is determined obsolete should be accelerated.

WHEREFORE, MidAmerican Energy Company respectfully requests the South Dakota Public Utilities Commission give these comments due consideration. MidAmerican representatives will be made available to meet with the Commission or Commission Staff to answer any additional questions or to provide any additional information.

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Respectfully submitted,

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