STATE OF IOWA

DEPARTMENT OF COMMERCE

UTILITIES BOARD

IN RE: INQUIRY INTO ADVANCED METERING AND TIME-BASED RATES	DOCKET NO. NOI-06-3

ORDER INITIATING INQUIRY

(Issued June 30, 2006)

On August 8, 2005, the Energy Policy Act of 2005 (EPACT 2005) was signed into law. Among the many provisions of this federal legislation are five new federal standards added to the Public Utility Regulatory Policies Act of 1978 (PURPA). One of these new standards is found in Section 1252 of EPACT 2005 and is entitled "Time-Based Metering and Communications." This standard, which can also be found in Title I, section 111(d) of PURPA and is commonly referred to as Standard 14, provides that all state utility commissions and utilities must consider and make a determination whether to adopt the standard. Standard 14 lists four types of time-based rate schedules for consideration. These are time-of-use pricing, critical peak pricing, real-time pricing, and credits for consumers with large loads. These are described more fully in the inquiry questions that will follow.

Pursuant to EPACT 2005, the Utilities Board (Board) must commence a proceeding on or before August 8, 2006, to consider adopting the standard. The Board may decline to adopt or implement a standard, but must state in writing the

reasons for its decision. If the Board fails to act within the deadline set forth in EPACT 2005, the standard must be considered in various utilities' rate proceedings.

Title I of PURPA applies only to utilities with total annual retail sales greater than 500 million kilowatt hours. In Iowa, this encompasses the two investor-owned, rate-regulated utilities, Interstate Power and Light Company (IPL) and MidAmerican Energy Company (MidAmerican), and these two utilities must participate in the inquiry. While it appears that the Board's consideration of PURPA standards applies only to rate-regulated utilities, three non-rate-regulated Iowa utilities, Eastern Iowa Light and Power Cooperative (Eastern Iowa), Ames Municipal Utilities (Ames), and Muscatine Power and Water (Muscatine), may also exceed (or nearly exceed) the PURPA kilowatt-hour threshold.

In order to obtain information on whether to adopt Standard 14, the Board will open an inquiry into advanced metering and time-based rates, identified as Docket No. NOI-06-3. Copies of this order will be mailed to Interstate Power and Light Company, MidAmerican Energy Company, the Consumer Advocate Division of the Department of Justice, and the applicable trade associations. Copies will also be provided for informational purposes to Eastern Iowa, Ames, and Muscatine; these utilities, and other interested persons, may wish to file responses to some of the questions.

One of the key focuses of PURPA, and Standard 14 in particular, is energy conservation. Therefore, several of the questions are designed to elicit information on energy conservation, as well as customer information and education, aspects of

the advanced metering and communications technology that may be implemented if Standard 14 is adopted.

All persons interested in participating in this notice of inquiry shall send e-mail or written confirmation of their intent to participate to the inquiry manager by July 14, 2006. Notice of participation shall include the following, if available: name of the participant/organization, contact person, mailing address, phone number, facsimile number, and e-mail address. If more than one person from any entity is planning to participate, the written confirmation shall include the names of all participants, but designate a single contact person. As soon as possible after July 14, 2006, the service list will be available on the Board's Web site, http:\\www.state.ia.us/iub, or by contacting the Board's Records Center or inquiry manager.

On or before September 15, 2006, all participants may file responses to some or all of the questions contained in the attachment to this order. However, MidAmerican and IPL shall respond to all of the questions. All responses shall be filed as follows: 1) an original and ten written copies, filed with the Board's Executive Secretary, 2) one copy, via e-mail, to the inquiry manager, and 3) one copy, via e-mail, to each participant on the service list. If a participant does not have an e-mail address, a copy is to be provided by mail or facsimile. All other communications regarding this inquiry are to be directed to the inquiry manager:

Gordon Dunn
Iowa Utilities Board
350 Maple Street
Des Moines, Iowa 50319-0069
Telephone: (515) 281-7051
Facsimile: (515) 281-5329
E-mail: gordon.dunn@iub.state.ia.us

After receipt and review of the comments, the Board will determine what additional procedures are necessary to complete the inquiry. Work sessions may be scheduled or additional comments on specific questions may be solicited. An oral presentation to solicit additional comments and argument may also be scheduled. Participants will be notified of any subsequent procedures established.

Comments are solicited on the inquiry questions. The list is not exclusive and participants are invited to submit comments on any other issues or questions that they believe are relevant to this inquiry and may provide recommendations to the Board.

QUESTIONS ON PURPA TITLE I, SECTION 111(D), STANDARD (14).

EPACT 2005 – PURPA Standard 14 – technical issues.

The Board notes that PURPA Standard 14 lists four "types of time-based rate schedules" as issues or items for discussion and investigation, including:

> (i) **time-of-use pricing** whereby electricity prices are set for a specific time period on an advance or forward basis, typically not changing more often than twice a year, based on the utility's cost of generating and/or purchasing such electricity at the wholesale level for the benefit of the consumer. Prices paid for energy consumed during these periods shall be pre-established and known to consumers in advance of such consumption, allowing them to vary their demand and usage in response to such prices and manage

their energy costs by shifting usage to a lower cost period or reducing their consumption overall;

(ii) **critical peak pricing** whereby time-of-use prices are in effect except for certain peak days, when prices may reflect the costs of generating and/or purchasing electricity at the wholesale level and when consumers may receive additional discounts for reducing peak period energy consumption;

(iii) **real-time pricing** whereby electricity prices are set for a specific time period on an advanced or forward basis, reflecting the utility's cost of generating and/or purchasing electricity at the wholesale level, and may change as often as hourly; and

(iv) **credits for consumers with large loads** who enter into pre-established peak load reduction agreements that reduce a utility's planned capacity obligations. (Emphasis added.)

The Board will refer to these "time-based rate schedules" as either rates or programs and use the highlighted terms as shortened forms of the definitions.

1. Describe and discuss the features of advanced utility meters used to measure and record customers' energy use, including:

a. What types of advanced meters are available, who are they made by, and what functions do they perform or support?

b. What makes currently available advanced meters superior to older "mechanical" meters and to previous versions of electronic recording meters?

c. What is the reliability history of advanced meters? Do any advanced meters maintain data registers or memory during power outages? Do any advanced meters record power excursions or momentary outages to support power quality programs of utilities?

d. Do any advanced meters accumulate and provide information about a customer's individual energy use down to the level of major appliances such as washers, air conditioners, or furnaces? Is the information readily accessible to customers via easily interpreted displays or data accessible through customers' computers? Are any

reports available about utility programs which include customer-friendly meter displays and assistance in using these displays to manage energy consumption?

e. What are the costs for various types or brands of advanced meters, such as capital costs, installation costs, and maintenance costs?

f. Are any advanced meters available as items or kits for retrofit onto existing old-style mechanical meters?

2. Describe and discuss the communications technology necessary to remotely interrogate or communicate with advanced meters or to remotely control or alert customers' meters or equipment.

a. Describe the various methods or systems for communicating with advanced meters, such as: power-line carrier technology, telecom landline technology, cellular radio technology, mobile (street-level) interrogation technology, and any other systems commercially available.

b. Discuss reliability issues relating to communications systems.

c. Discuss additional functions that might be accomplished with a combination of advanced metering and communication systems, such as remote meter reading, outage and restoration verification, remote connect and disconnect functions, and remote control of major appliances such as air conditioners or water heaters.

d. Describe the costs of various communications technologies used purely for energy metering. Discuss the remote control option and whether such a function would impose additional communications-related costs.

e. Discuss additional functions achievable with advanced communications technologies, such as high-speed Internet service, cable televideo services or other high data-rate services, and describe how the costs might be segregated or allocated among the energy-related and purely telecom-related functions.

3. Describe and discuss the hardware, software, and administrative systems needed to collect, interpret, and manage the data from advanced meters and communication systems.

a. What systems and functions are needed at central offices to interrogate meters, accumulate and validate data, and produce reports and billing information?

b. Are any other systems needed to use advanced meters and communications for remote control of customers' appliances?

c. Describe the potential costs of the various elements of the central data collection and management efforts and systems, including hardware, software, and personnel costs.

4. In Iowa, describe existing utility programs involving time-based rates for customers. Describe programs or rates separately for customer classes, subclasses, or groups of classes. For each time-based rate schedule or program, provide the following:

a. The utility rate features of the rate or program and which of the four types of time-based rates are involved (time-of-use pricing, critical peak pricing, real-time pricing, credits for large customers).

b. Describe how current participating customers compare with nonparticipants, in terms of load profiles and overall electricity use.

c. Describe the metering costs, system costs, and administrative costs.

d. Describe the numbers of participants and trends in participation.

e. Describe the megawatt savings for each program in terms of system peak electric demand.

f. Describe the benefits in terms of avoided cost savings and provide a benefit-cost analysis for the societal and utility perspectives.

g. Discuss other or non-monetary benefits that are associated with time-based rate programs or tariffs.

5. Discuss which of the four PURPA time-based rate schedules (time-of-use pricing, critical peak pricing, real-time pricing, credits for large customers) are most applicable to various classes of customers?

6. Which types of advanced metering would potentially enhance or expand time-based rate programs for various classes of customers?

7. What minimum levels and costs of communications and central office technology and administration would be needed to operate advanced metering and communications for various classes or subclasses of customers? What would be the costs for minimum systems?

8. What studies exist to show the results of applying advanced metering and communications to various classes of customers?

9. What studies or information exist to show the results of coupling advanced metering and communications for various customer classes or groups with on-site displays of customer energy use, remote control of customer appliances, or programs to assist customers in acquiring technology to shift energy use off-peak?

10. What types and levels of customer education might be essential to the success of advanced metering and time-based rates for various classes of customers?

11. What types of time-based rates should be offered or available to residential and various customer classes: time of use pricing, critical peak pricing, real-time pricing, or credits for load reductions (such as credits for remote control of appliances)?

12. What should be the goals of programs intended to apply advanced metering and communications to various classes or groups of customers? Should the goals be primarily energy savings, peak capacity savings, system reliability, customer education and control of energy use, or some other priorities?

13. Should time-based rates as defined in PURPA Standard 14 be mandatory for all customers, mandatory for some customers, or purely voluntary?

14. Should Iowa investor-owned utilities be required to establish rates or programs for time-based rates as defined in PURPA Standard 14, and provide advanced metering and communications equipment and services to customers as voluntary programs?

15. If Iowa investor-owned utilities are required to provide time-based rates coupled with advanced metering and communications services, how should the costs for such rates or programs be allocated and recovered?

16. Discuss whether advanced metering and communication technology can potentially enhance demand-response options for energy markets, particularly markets implemented by independent system operators.

IT IS THEREFORE ORDERED:

1. An inquiry, identified as Docket No. NOI-06-3, is initiated concerning advanced metering and time-based rates as set forth in PURPA Standard 14.

2. Interested person wishing to participate in this inquiry shall file the information described in this order by July 14, 2006.

UTILITIES BOARD

/s/ John R. Norris

/s/ Diane Munns

ATTEST:

/s/ Judi K. Cooper
Executive Secretary

/s/ Curtis W. Stamp

Dated at Des Moines, Iowa, this 30th day of June, 2006.