BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF THE CONSIDERATION OF THE NEW PURPA STANDARDS AS SET FORTH IN THE ENERGY POLICY ACT OF 2005	))))))	**DECISION REGARDING INTERCONNECTION AND TIME-BASED METERING STANDARDS; NOTICE OF ENTRY OF ORDER EL06-018**

On August 8, 2005, the Energy Policy Act of 2005 ("EPAct 2005") was signed into law. Certain provisions in the EPAct 2005 amend the Public Utility Regulatory Policies Act ("PURPA") of 1978. The EPAct 2005 adds five new federal standards to PURPA. The five standards regard net metering, fuel diversity, fossil fuel generation efficiency, time-based metering, and interconnection for distributed resources. Under the EPAct 2005, the Public Utilities Commission (Commission) has varying timelines within which to consider these standards and determine whether to adopt them.

At its May 23, 2006, meeting, the Commission considered how to proceed with the consideration of the new PURPA standards. The Commission sought comments from interested persons or entities on how to proceed and other issues. Written comments were due on or before June 20, 2006.

At its July 11, 2006, meeting, the Commission considered this matter. With respect to net metering, the Commission found that it will not consider the net metering standard. The Commission noted that the Legislature has already considered the implementation of net metering and has rejected any such implementation in past legislative sessions. Pursuant to section 112(d)(3) of PURPA, the obligation to consider the net metering standard does not apply if "the State legislature has voted on the implementation of such standard (or a comparable standard) for such utility."

The Commission further found that the affected utilities are the rate regulated investor owned utilities. The Commission also decided that this docket will encompass all of the affected utilities and will address all of the remaining standards. In addition, the Commission determined that it would decide what type of hearings to hold and whether to implement any standards through a rulemaking after the intervention deadline.

The Commission set an intervention deadline of August 15, 2006. On August 11, 2006, the Commission received a Petition to Intervene from MidAmerican Energy Company (MidAmerican). On August 14, 2006, the Commission received a Petition to Intervene from Itron, Inc. (Itron). On August 15, 2006, the Commission received Petitions to Intervene from NorthWestern Corporation d/b/a NorthWestern Energy (NWE), Northern States Power Company d/b/a Xcel Energy (Xcel) and Montana-Dakota Utilities Co., a division of MDU Resources Group, Inc. (MDU). On August 17, 2006, the Commission received a Petition to Intervene from Otter Tail Corporation d/b/a Otter Tail Power Company (OTP) and a Petition for Late Filed Intervention from Black Hills Power, Inc. (BHP). By order dated September 11, 2006, the Commission granted intervention to MidAmerican, Itron, NWE, Xcel, MDU, OTP and BHP.

At its November 14, 2006, meeting, the Commission considered how to proceed. The Commission decided to ask for written comments from the parties regarding the standards and then conduct workshops to further study whether to implement the standards. The Commission requested that the parties file the comments on or before January 9, 2007. On January 9, 2007, the Commission received comments from OTP, MidAmerican, and BHP.

The Commission held a workshop on May 1, 2007, to further discuss the standards. At its May 8, 2007, meeting, the Commission decided to hold a hearing regarding the interconnection for distributed generation and time-based metering standards. The hearing was held as scheduled on May 30, 2007. The transcript of the workshop shall be cited to as "Wrk. Tr.". The transcript of the hearing shall be cited to as "Tr.".

At its July 11, 2007, meeting, the Commission considered the interconnection and time-based metering standards. With respect to the time-based metering standard, the Commission unanimously voted to not adopt the standard. With respect to the interconnection standard, the Commission unanimously voted to adopt the standard.

Based upon the record in this proceeding, the Commission makes the following findings of fact and conclusions of law:

FINDINGS OF FACT

1. On August 8, 2005, the EPAct 2005 was signed into law. Certain provisions in the EPAct 2005 amend PURPA. The EPAct 2005 adds five new federal standards to PURPA. The five standards regard net metering, fuel diversity, fossil fuel generation efficiency, time-based metering, and interconnection for distributed resources. Under the EPAct 2005, the Public Utilities Commission (Commission) has varying timelines within which to consider these standards and determine whether to adopt them.

2. The goals of PURPA are to encourage: 1) the conservation of energy supplied by electric utilities; 2) optimal efficiency of electric utility facilities and resources, and 3) equitable rates for electric consumers. Section 101 of PURPA.

3. In a prior order, the Commission found that the utilities affected by the Commission's decisions regarding these standards are the rate-regulated public utilities.

4. By order dated September 11, 2006, the Commission granted intervention to MidAmerican, Itron, NWE, Xcel, MDU, OTP and BHP.

5. In a prior order, the Commission found that it will not consider the net metering standard. The Commission noted that the Legislature has already considered the implementation of net metering and has rejected any such implementation in past legislative sessions. Pursuant to section 112(d) (3) of PURPA, the obligation to consider the net metering standard does not apply if "the State legislature has voted on the implementation of such standard (or a comparable standard) for such utility."

6. The Commission requested written comments from the parties regarding the standards. The Commission received comments from OTP, MidAmerican, and BHP.

7. The Commission held a public workshop on May 1, 2007, to discuss the four remaining standards. On May 30, 2007, the Commission held a public hearing regarding the interconnection and time-based metering standards. At the hearing, the written comments and the workshop proceeding were entered into the record.

Time-Based Metering Standard

8. The time-based metering standard provides as follows:

(14) Time-Based Metering and Communications
(A) Not later than 18 months after the date of enactment each electric utility shall offer each of its customer classes, and provide individual customers upon customer request, a time-based rate schedule under which the rate charged by

the electric utility varies during different time periods and reflects the variance, if any, in the utility's cost of generating and purchasing electricity at the wholesale level. The time-based rate schedule shall enable the electric consumer to manage energy use and cost through advanced metering and communications technology.

(B) The types of time-based rate schedules that may be offered under the schedule referred to above include, among others –

(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.

(C) Each Electric utility subject to subparagraph (A) shall provide each customer requesting a time-based rate with time-based meter capable of enabling the utility and customer to offer and receive such rate, respectively.

(D) For purposes of implementing this paragraph, any reference contained in this section to the date of enactment of the Public Utility Regulatory Policies Act of 1978 shall be deemed to be a reference to the date of enactment of this paragraph.

(E) In a State that permits third-party marketers to sell electric energy to retail electric consumers, such consumers shall be entitled to receive the same time-based metering and communications device and service as a retail electric consumer of the electric utility.

(F) Notwithstanding subsections (b) and (c) of section 112, each State regulatory authority shall, not later than 18 months after the date of enactment of this paragraph conduct an investigation in accordance with section 115(i) and issue a decision whether it is appropriate to implement the standards set out in subparagraphs (A) and (C).

Section 1252 of the EPAct of 2005, Section 111(d)(14) of PURPA.

9. At the workshop, presentations regarding the time-based metering standard were made by Tamie Aberle, MDU; Erich Gunther, Chairman and Chief Technology Officer for EnerNex Corporation; and Chuck Rea, MidAmerican. At the hearing, testimony on this standard was given by Chuck Rea, MidAmerican; Tamie Aberle, MDU; Dave Prazak, OTP; Bill Thomas, NWE; Jim Keck, BHP; and Phil Zins, Xcel.

10. MDU opposes adoption of the standard. MDU's position is that pricing options should be voluntary and designed on a utility-by-utility basis and not part of a mandatory standard. Wrk. Tr. at 148.

11. MidAmerican stated that its current tariff offerings in South Dakota comply with the standard. Tr. at 8. MidAmerican is neutral on whether the Commission should adopt the standard as written. MidAmerican supports mandatory use of time based pricing for large customers because technology is basically already in place. MidAmerican does not support mandatory use for residential and smaller customers. Tr. at 9.

12. OTP opposes adoption of the standard and believes that adoption of the standard would force uneconomic decisions for its ratepayers. Tr. at 24-25.

13. Based on its evaluation of the costs and benefits of time-based metering, NWE's position is that the cost of service would increase without a meaningful reduction in power supply expenses. Tr. at 40-41. NWE stated that rates would rise unnecessarily if the standard were adopted in its present form. Tr. at 41. NWE also noted that load and customer density are important in determining the economics of time-based pricing. *Id.* NWE's service territory is sparsely populated with a lower average load per unit area when compared to metropolitan areas. *Id.* NWE recommended that the Commission allow the utilities to perform additional investigations and field trials and then present the results of these investigations to the Commission. Tr. at 42.

14. BHP also opposes adoption of the standard, asserting that it would lead to increased costs to customers and would not meet its customers' needs. Tr. at 57. BHP believes that its current offerings are well suited for its service territory and that its customer load characteristics are different from other utilities. Tr. at 54, 56. BHP recommended that time based metering should be developed based on each utility's need and that a statewide standard should not be adopted. Tr. at 56.

15. Xcel opposed requiring any time-of-use rates be mandatory. Tr. at 63-64. Xcel also stated that time-of-day rates for small classes and residential are not cost-effective. Tr. at 62.

16. Erich Gunther, representing EnerNex and the Department of Energy's GridWise Architecture Council, stated that each utility will have a different set of elements that will make or break the business case for putting in advanced metering infrastructure (AMI). Wrk. Tr. at 165. The utility should look at all of the applications that utilize communications when evaluating AMI. Wrk. Tr. at 178. He stated that the technology exists and costs are going down. Wrk. Tr. at 169. He also stated that the utilities he has worked with eventually found value in the technology. *Id.* He recommended using multiple vendors in order to mix and match different equipment. Wrk. Tr. at 170. He also emphasized the importance of regulatory stability and incentives for the utilities to maximize the value from AMI. Wrk. Tr. at 171.

17. The Commission finds that it will not adopt the time-based metering standard. The Commission finds that little evidence was presented that demonstrated that the adoption of this standard at this time would meet the PURPA goals of energy conservation, efficiency of facilities and resources and equitable consumer rates. The Commission finds that adoption of the standard could result in the utilities being required to offer uneconomic programs that result in higher rates.

18. The Commission recognizes that time-based metering programs can be beneficial. The Commission notes that the utilities offer time-based metering programs to certain classes of customers and have found benefits to these programs. However, the Commission believes that additional studies are needed as to the benefits of such programs for all customer classes in South Dakota. The Commission finds that the utilities and others are continuing to evaluate and study such programs to determine their effectiveness. At this time, the Commission is not convinced that the benefits of mandatory time-based metering for all customer classes will outweigh the costs.

Interconnection Standard

19. The interconnection standard provides as follows:

> (15) Interconnection. Each electric utility shall make available, upon request, interconnection service to any electric consumer that the electric utility serves. For purposes of this paragraph, the term `interconnection service' means service to an electric consumer under which an on-site generating facility on the consumer's premises shall be connected to the local distribution facilities. Interconnection services shall be offered based upon the standards developed by the Institute of Electrical and Electronics Engineers: IEEE Standard 1547 for Interconnecting Distributed Resources with Electric Power Systems, as they may be amended from time to time. In addition, agreements and procedures shall be established whereby the services offered shall promote current best practices of interconnection for distributed generation, including but not limited to practices stipulated in model codes adopted by associations of state regulatory agencies. All such agreements and procedures shall be just and reasonable, and not unduly discriminatory or preferential.

Section 1254 of the EPAct of 2005, Section 111(d)(15) of PURPA.

20. At the workshop, presentations regarding the interconnection standard were made by Jeff Rud, East River Electric Power Cooperative; Brad Klein, Environmental Law and Policy Center; Don Raveling, MDU; and Brad Johnson, consultant for the Department of Energy, Office of Electricity, National Renewable Energy Laboratory. At the hearing, testimony on this standard was given by Dehn Stevens, MidAmerican; Don Raveling, MDU; Dave Prazak, OTP; John Campbell, NWE; Jim Keck, BHP, and Tom Yohn, Xcel.

21. NWE recommended that the Commission not adopt the interconnection standard. Tr. at 71. NWE also stated that it does not rely on the IEEE 1547 standards exclusively. Tr. at 73. NWE did not want IEEE 1547 to be the only standard that could be applied. Tr. at 74.

22, MidAmerican believes that the IEEE 1547 standard is necessary but not sufficient. Tr. at 79. There are other ANSI or IIEEE standards that would be appropriate. Tr. at 80. MidAmerican explained the different types of generator interconnections and how MidAmerican handles them. Tr. at 82-86. MidAmerican agreed that it could file its interconnection requirements with the Commission on an informational basis. Tr. at 94.

23. OTP preferred that the Commission adopt the Minnesota distributed generation standards while allowing flexibility to the utilities that have existing interconnection policies. Tr. at 99. OTP also stated that it would be willing to participate in a work group that deals with distributed interconnection issues. Tr. at 101.

24. BHP has not yet adopted any interconnection guidelines and deals with customers on a case-by-case basis. Tr. at 112. BHP is beginning to develop an interconnection policy. *Id.* BHP preferred that the standard not be adopted. *Id.* BHP stated that the IEEE 1547 is still a work in progress. *Id.* BHP proposed that each utility file its interconnection guidelines and standards with the Commission for approval. *Id.* If the Commission determined that it wants to adopt statewide interconnection standards, BHP preferred that they be adopted as guidelines as opposed to strict standards. Tr. at 113. A third option would be to appoint a study group to look into statewide standards. Tr. at 114.

25. MDU stated that state-mandated interconnection standards are not necessary. Tr. at 116. MDU stated that it has procedures regarding interconnection in place. Tr. at 16. With respect to IEEE 1547, it could be adopted as a base model, not as an exclusive standard. Tr. at 121. MDU uses other standards in addition to IEEE 1547 to cover areas not addressed by IEEE 1547. Tr. at

130. As an alternative to state-mandated standards, MDU suggested that each utility file its interconnection standards as a tariff for Commission approval. Tr. at 124.

26. Xcel did not support the adoption of the standard as presently proposed. If the Commission wanted to provide statewide requirements, Xcel recommended a workshop. Tr. at 133. Xcel believes IEEE 1547 is a good minimum requirement for basic installations of small units. Tr. at 133. For larger units, it takes a detailed study and multiple standards. *Id.* Of the different models that have been developed, Xcel recommended consideration of the Minnesota model. Tr. at 136.

27. Brad Klein, an attorney with the Environmental Law on Policy Center, stated that there are important energy benefits as well as economic benefits to distributed generation. Wrk. Tr. at 30. He recommended that the Commission begin a workshop process with an existing interconnection model in order to help move the process forward. Tr. at 138.

28, Jim Burg, a former Commissioner, advocated the use of streamlined procedures in order to facilitate the development of renewable resources. Tr. at 141-42. He recommended the filing of the utilities' interconnection procedures with the Commission and then finding the commonalities and make it a more simplified process. Tr. at 144-45.

29. East River noted that it has developed a set of interconnection requirements for of its member systems that has proven to be quite valuable. Wrk. Tr. at 11. The interconnection requirements are similar to the ones in Minnesota but are not as formalized. Wrk. Tr. at 27. The IEEE 1547 standards are referenced in the purchase power contracts. Wrk. Tr. at 25-26.

30. Brad Johnson, consultant for the Department of Energy, Office of Electricity, National Renewable Energy Laboratory, stated that NREL believes that a lack of consistent interconnection approaches is a barrier for distributed generation. Wk Tr. at 73. He recommended the use of a four-tiered system, with the first tier applying to the smallest systems. Depending on the tier, and other conditions a generator project could be eligible for expedited review. Wrk Tr. at 82. He also explained some of the different models that had been developed or were in the process of being developed.

31. The Commission finds that it will adopt the interconnection standard. The Commission finds that the adoption of this standard will facilitate the development of distributed generation and will encourage the goals of PURPA. Interconnection procedures that reflect current best practices will assist customers who are interested in developing and implementing distributed generation such as small wind projects.

32. With respect to the IEEE 1547 standards, the Commission adopts the IEEE 1547 and 1547.1 standards. When the other IEEE 1547 standards are officially accepted by the Institute of Electrical and Electronics Engineers, the Commission shall seek comment from interested parties as to whether these additional standards should be adopted by the Commission. Based on the testimony that other standards are also applicable, the Commission also finds that the IEEE 1547 standards shall not be the only standards that may be applied.

33. Further, as a first step, the Commission will require the utilities to file their interconnection procedures and technical requirements with the Commission for approval. The filing of these procedures and requirements will enable customers who are considering distributed generation to be able to access the procedures and requirements from the Commission or the utility. It will also ensure that each utility applies the same procedures and requirements to every customer.

34. The second step will be for Commission Staff to work with the utilities to develop model interconnection procedures. Staff and the utilities may begin with an already developed model, such as the one developed in Minnesota, as a starting point. Following the workshops, Staff shall submit a report in 2008 detailing the result of the workshops and give a recommendation on how the Commission should proceed.

CONCLUSIONS OF LAW

1. The Commission has jurisdiction over this matter pursuant to SDCL chapter 49-34A, specifically 49-34A-93, and the EPAct 2005.

2. The Commission concludes, for the reasons listed in findings of fact 17-18, that the Commission will not adopt the time-based metering standard.

3. The Commission concludes, for the reasons listed in findings of fact 31-34, that it will adopt the interconnection standard for distributed generation.

4. The utilities shall file their interconnection procedures and requirements with the Commission for approval within 60 days from the date of this order.

5. Commission Staff and the utilities will work together in a workshop setting to develop model interconnection procedures. Staff shall submit a report detailing the results of those workshops and Staff's recommendation on how to proceed.

It is therefore

ORDERED, that the Commission does not adopt the time-based metering standard; and it is

FURTHER ORDERED, that the Commission adopts the interconnection standard subject to the above findings.

NOTICE OF ENTRY OF ORDER

PLEASE TAKE NOTICE that this Order was duly entered on the 26th day of July, 2007. Pursuant to SDCL 1-26-32, this Order will take effect 10 days after the date of receipt or failure to accept delivery of the decision by the parties.

Dated at Pierre, South Dakota, this 26th day of July, 2007.

CERTIFICATE OF SERVICE

The undersigned hereby certifies that this document has been served today upon all parties of record in this docket, as listed on the docket service list, electronically.

By: Delaine Kolbo

Date: 7/26/07

(OFFICIAL SEAL)

BY ORDER OF THE COMMISSION:

Dustin M. Johnson

DUSTIN M. JOHNSON, Chairman

Gary Hanson

GARY HANSON, Commissioner

Steve Kolbeck

STEVE KOLBECK, Commissioner