



**minnesota power** / 30 west superior street / duluth, minnesota 55802-2093 / 218-723-3907 / www.mnpower.com

Bethany M. Owen -- attorney  
fax 218-723-3955  
e-mail bowen@allete.com

June 5, 2003

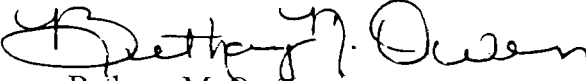
**Via Federal Express**

Burl W. Haar  
Executive Secretary  
MN Public Utilities Commission  
Suite 350  
121 East Seventh Place  
St. Paul, MN 55101-2147

Re: In the Matter of ALL ELECTRIC COMPANIES  
Establishing Generic Standards for Utility Tariffs  
For Interconnection and Operation of Distributed  
Generation Facilities Under MN Law 2001, Chapter 212  
Docket No. E999/CI-01-1023

Enclosed to the Commission for filing is an original and fifteen copies of Minnesota Power's Initial Comments on the Phase II Report of the Technical Standards Workgroup, together with a Summary, and Affidavit of Service upon all parties of record.

Very truly yours,

  
Bethany M. Owen

Enclosures

c: Per Attached Service List

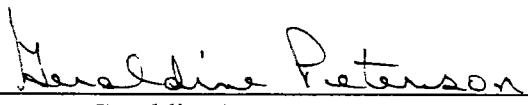
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STATE OF MINNESOTA )  
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COUNTY OF ST. LOUIS )

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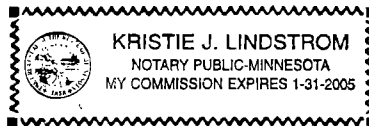
Geraldine Peterson of the City of Duluth, County of St. Louis, State of Minnesota, says that on the 5<sup>th</sup> day of June, 2003, she served Minnesota Power's Initial Comments on the Phase II Report of the Technical Standards Workgroup to Burl Haar, Kathy Aslakson and Julia Anderson via Federal Express. The persons on the attached Service List were served a copy via First Class Mail.

  
\_\_\_\_\_  
Geraldine Peterson

Subscribed and sworn to before me  
this 5<sup>th</sup> day of June, 2003.

  
\_\_\_\_\_  
Notary Public

Aff.of.Serv.doc



**STATE OF MINNESOTA  
BEFORE THE  
MINNESOTA PUBLIC UTILITIES COMMISSION**

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In the Matter of All Electric  
Companies Establishing Generic  
Standards for Utility Tariffs for  
Interconnection and Operation of  
Distributed Generation Facilities  
Under MN Law 2001, Chapter 212

Docket No. E999/CI-01-1023

**MINNESOTA POWER'S  
INITIAL COMMENTS ON THE  
PHASE II REPORT OF THE  
TECHNICAL STANDARDS  
WORKGROUP**

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**SUMMARY**

Minnesota Power submits its Initial Comments on the Phase II Report of the Technical Standards Workgroup in the referenced distributed generation docket. Minnesota Power supports the position of the Department of Commerce on several issues that were the subject of debate in the Technical Standards Workgroup. Minnesota Power also identifies revisions to the proposed "State of Minnesota Interconnection Agreement for the Interconnection of Extended Parallel Distributed Generation Systems with Electric Utilities" and "Interconnection Process for Distributed Generation Systems" that address certain inconsistencies as well as substantive and typographical issues contained in those documents.

**STATE OF MINNESOTA  
BEFORE THE  
MINNESOTA PUBLIC UTILITIES COMMISSION**

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In the Matter of All Electric  
Companies Establishing Generic  
Standards for Utility Tariffs for  
Interconnection and Operation of  
Distributed Generation Facilities  
Under MN Law 2001, Chapter 212

Docket No. E999/CI-01-1023

**MINNESOTA POWER'S  
INITIAL COMMENTS ON THE  
PHASE II REPORT OF THE  
TECHNICAL STANDARDS  
WORKGROUP**

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**I. INTRODUCTION**

Minnesota Power actively participated in the Technical Standards Workgroup (“Workgroup”) assembled by the Department of Commerce (“Department”) in connection with the distributed generation docket (“Docket”). The Workgroup participants worked diligently to develop the Phase II Report of the Technical Standards Workgroup (“Report”) as submitted by the Department to the Public Utilities Commission (“Commission”) on May 22, 2003.

In general, the Report reflects the Workgroup participants’ agreement on many of the technical, administrative and procedural issues raised in the Docket. However, as the Department noted in its summary of the process, the Workgroup participants were unable to reach consensus on several important issues related to the interconnection of distributed generation customers with utilities’ distribution systems. Those issues included: insurance requirements for distributed generation customers (“Interconnection Customers”); utility response times for engineering studies; costs to be paid by Interconnection Customers for engineering studies; and operation and maintenance agreements relating to the distributed generation facilities.

The Report also contains the Department’s proposed drafts of the “State of Minnesota Interconnection Agreement for the Interconnection of Extended Parallel Distributed Generation Systems with Electric Utilities” (“Interconnection Agreement”) and “Interconnection Process for Distributed Generation Systems” (“Interconnection Process”). To address certain inconsistencies

as well as substantive and typographical issues, Minnesota Power identifies revisions to these documents. To ensure that all interested parties have sufficient time to review these revisions, Minnesota Power has elected to file these revision-marked documents before the deadline for Reply Comments in this Docket. Attachment A to this filing is the Department's proposed Interconnection Agreement with revision markings to illustrate the changes identified by Minnesota Power. Minnesota Power plans to file a revision-marked version of the Interconnection Process document not later than June 13, 2003.

## **II. COMMENTS**

Minnesota Power appreciates having the opportunity to participate in the Workgroup process in connection with this Docket, and we believe that the Workgroup achieved resolution of many of the difficult yet important issues raised in this Docket. However, the Department identifies four issues on which the Workgroup was unable to reach consensus, and Minnesota Power provides the following comments relating to those issues.

### **A. Insurance Requirements for Interconnection Customers**

Minnesota Power agrees with the Department's proposed insurance requirements set forth in the Interconnection Agreement and does not believe that the proposed coverage is excessive. Because Interconnection Customers seek to interconnect their distributed generation facilities directly with the utilities' distribution systems, these interconnections present numerous risks and challenges affecting the safety and reliability of the utilities' systems. In fact, given the significant risks associated with distributed generation interconnection for utilities and the other customers they serve, the insurance parameters contained in the Interconnection Agreement represent the very minimum coverage types and amounts that should be required of Interconnection Customers.

Workgroup participants examined the distributed generation insurance requirements adopted by other states throughout the country, and the Department included in its Report a chart comparing the proposed Minnesota insurance requirements with those of the other states. As shown by the comparison chart, the Department's proposed insurance requirements are in-line with those adopted elsewhere.

## **B. Utility Response Times**

Minnesota Power agrees with the Department's proposal relating to utility response times, as set forth in the Interconnection Process document. In that document, the Department sets forth detailed steps that Interconnection Customers must take and the corresponding responses that the utilities must make in the interconnection of distributed generation. This Interconnection Process document covers the interconnection of all types of generation systems rated up to 10 MW of total generation nameplate capacity. Some of the steps contain specific timeframes within which a utility must respond to an Interconnection Customer's inquiry. However, just as the scope of the Interconnection Customer's preparations depends in large part on the scale of its planned project, the utility's preparations and timing of responses depend on the size and type of the proposed project. This is certainly true for the utility's engineering studies required for each distributed generation proposal. Given the associated risks, it is in the interest of both the utility and the Interconnection Customer to ensure that thorough, detailed engineering studies of proposed distributed generation projects are completed before such projects are brought on-line.

The Department's Interconnection Process document correctly anticipates that the unique nature and size of Interconnection Customers' projects prevent the imposition of specific and uniform utility response times. As noted by the Department in its summary of the Report, Minnesota Power and the other utility participants in the Workgroup will continue to apply their collective experience and knowledge to reduce review times so that these concerns are addressed equitably, given the nature and scope of those customers' proposed projects.

## **C. Costs to be Paid by Interconnection Customers**

Under the Department's proposal, the Interconnection Customer is responsible for payment of all the utility's actual costs associated with the customer's proposed distributed generation project. These costs include those associated with: engineering studies; dedicated facilities (equipment, design and installation labor); monitoring and control systems (equipment, design and installation labor); design coordination and review; construction coordination labor; development of tests and physical testing; contingency; and other actual costs of the utility. Like utility response times, costs to be paid by Interconnection Customers are impossible to

standardize, given the wide scale and unique nature of potential distributed generation projects. The specific characteristics of the Interconnection Customer's proposed project will govern the utility's actual costs associated with the interconnection of that project with the utility's distribution system.

The Department's Interconnection Process document and Interconnection Agreement correctly acknowledge that utilities can only provide estimates of these costs at various stages in the Interconnection Process. In the Report summary, the Department noted that some non-utility participants in the Workgroup expressed particular concern about the actual costs associated with the engineering studies of each proposed distributed generation project. The proposed Interconnection Process document and Interconnection Agreement provide that the Interconnection Customer is responsible for the utility's actual costs, even if those costs exceed original estimates. Recognizing the difficulty of providing accurate and complete estimates of actual costs before the commencement of a project, the Department's Interconnection Process document provides that the utility must notify the Interconnection Customer when it determines that the actual costs for the engineering study will exceed the original estimate by 25% or more. The Interconnection Customer is then afforded the opportunity to decline to move forward with the project.

Minnesota Power agrees that the Department's Interconnection Process document and Interconnection Agreement appropriately balance the Interconnection Customer's cost concerns with the utility's difficulty in precisely estimating actual costs of a project before the project commences.

#### **D. Operation and Maintenance Agreements**

Minnesota Power agrees with the Department's inclusion of guidelines, rather than standard form agreements, for the operation and maintenance agreements between utilities and Interconnection Customers. The size and scope of the proposed distributed generation project necessitate individual operation and maintenance agreements that are specifically tailored to each such project. In fact, this non-standardization benefits both the Interconnection Customer and the utility.

The Department's guidelines for operation and maintenance agreements are set forth in Exhibits D and E to the proposed Interconnection Agreement. These guidelines also provide an opportunity for the parties to review the operation and maintenance agreements and, upon written agreement of the parties, to update them periodically to ensure that they are appropriately tailored to the issues and risks actually presented by the distributed generation project after its interconnection with the utility's system. Minnesota Power agrees that this review mechanism is sufficient to address the Interconnection Customer's concerns about standardization, while ensuring that unique issues presented by the distributed generation project are adequately addressed.

### **III. REVISIONS TO THE INTERCONNECTION AGREEMENT**

Minnesota Power has reviewed the proposed Interconnection Agreement and has identified several revisions designed to correct typographical errors and certain inconsistencies including defined terms, as well as to address more substantive issues. Attachment A to this filing is the Department's proposed Interconnection Agreement, with revision markings to illustrate the changes identified by Minnesota Power. In addition to the typographical, definitional and other non-substantive revisions, Minnesota Power has included the following revisions:

- (1) In Section I (C), the phrase "and any applicable tariffs of the Area EPS Operator" is added to reflect the fact that, as provided in Section XII (E) of the Interconnection Agreement, the utility's tariffs may apply to certain aspects of the distributed generation project.
- (2) Sections II (B) and II (I) modify the definitions of "Area EPS Operator" and "Interconnection Customer" to reflect the fact that those entities are the same ones provided in the first paragraph of the Interconnection Agreement.
- (3) In Section V (1) (c), the phrase, "Subject to the terms of this paragraph and its responsibility for all associated costs" has been added to the third sentence to clarify the fact that the Interconnection Customer's cancellation of a proposed project is subject to those terms. In addition in this Section as well as in Section VII (A) (2), the word "commercially" was inserted to define "reasonable" to reflect the fact that both parties are commercial entities and the reasonableness of their actions and decisions should be judged in that commercial context.



- (4) In Section V (2) (a), two revisions were made to clarify that the Interconnection Customer's adequate assurance of credit is linked to its obligations under the agreement itself and to provide for additional possible forms of credit assurance.
- (5) New Sections VII (A) (4) (b) and (e) have been added to enable the utility to terminate the agreement in the event the Interconnection Customer: fails to pay amounts due after notice and expiration of the cure period, or fails to cure any other material breach of the agreement within the applicable cure period.
- (6) Section VIII (B) was revised to provide the utility with right of access to its own equipment and facilities located on the Interconnection Customer's premises if such access is necessary in connection with the utility's service obligations to other customers.
- (7) Several revisions were made to Section VIII (G) to provide that the Interconnection Customer must notify the utility of any proposed modifications to the generation system and must obtain the utility's approval before commencing such modifications.
- (8) At the beginning of Section XI (A) (4), the phrase "At a minimum" was added to reflect the fact that the type of insurance coverage listed in that section is the minimum required, and the Interconnection Customer should obtain any additional insurance coverage (in terms of claims and amounts) sufficient to address its liability and obligations, including those set forth in the Interconnection Agreement.
- (9) Section XI (F) (2) was revised to clarify that, if an Interconnection Customer ceases to meet the self-insurance requirements set forth in Section XI, it must comply with the requirements set forth in Section XI (A) – (E).
- (10) In Section XII (A) (1), "act of terrorism" has been added to the list of Force Majeure events.
- (11) In Section XII (E) (2), revisions were made to reflect the fact that the utility's tariffs may apply to generation interconnection and that those tariffs may be amended by the utility from time to time.
- (12) Section XII (E) (3) was revised to add the phrase "or any other governing regulatory body" to clarify that the rules of a regulatory body other than the Commission may govern the utility's application to change its rates, charges, classifications, services, tariffs, rules or any agreements related thereto.
- (13) Section XII (G) was revised to clarify that the Interconnection Agreement supersedes only those prior agreements or understandings related to the specific interconnection currently proposed.
- (14) Several revisions were made to Section XII (I) to clarify that the utility is making no warranties of any kind to the Interconnection Customer or any third party.

- (15) Notations were made in Exhibit D (Operating Agreement) and in Exhibit E (Maintenance Agreement) to reflect the fact that "Right of Access" and "Modifications to the Generating System" should be addressed in either the body of the Interconnection Agreement or the Operating and Maintenance Agreements.

#### **IV. REVISIONS TO THE INTERCONNECTION PROCESS**

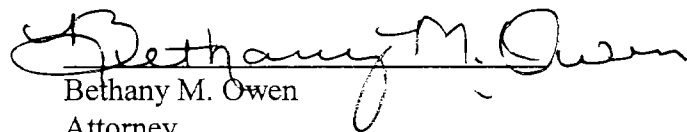
In order to minimize inconsistencies between the two documents, Minnesota Power's revisions to the proposed Interconnection Agreement necessitate similar types of revisions to the Department's proposed Interconnection Process document. To ensure that interested parties have sufficient time to review these revisions before the Reply Comment deadline in this Docket, Minnesota Power will file the revision-marked Interconnection Process document by June 13, 2003.

#### **V. CONCLUSION**

Minnesota Power respectfully submits its position on the unresolved issues identified by the Department and requests that the Commission adopt the attached revisions to the Interconnection Agreement. In addition, Minnesota Power will file its revisions to the Interconnection Process document by June 13, 2003.

Dated: June 5, 2003

Respectfully submitted,



Bethany M. Owen  
Attorney  
Minnesota Power  
30 West Superior Street  
Duluth, MN 55802  
218-723-3907

**ATTACHMENT A**

**Revision-Marked Interconnection Agreement**

# State of Minnesota Interconnection Agreement For the Interconnection of Extended Parallel Distributed Generation Systems With Electric Utilities

This Generating System Interconnection Agreement (Agreement) is entered into by and between the Area Electrical Power System Operator (Area EPS Operator) "\_\_\_\_\_" and the Interconnection Customer "\_\_\_\_\_". The Interconnection Customer and Area EPS are sometimes also referred to in this Agreement jointly as "Parties" or individually as "Party".

In consideration of the mutual promises and obligations stated in this Agreement and including its exhibits and other attachments, the Parties agree as follows:

## I. SCOPE AND PURPOSE

- A) Establishment of Point of Common Coupling. This Agreement is intended to provide for the Interconnection Customer's ~~to interconnection~~ and operation of a Generation System with a total Nameplate Capacity of less than 10MW, in parallel with the Area EPS at the location identified in Exhibit C and shown in the Exhibit A one-line diagram.
- B) This Agreement governs the facilities required to, and contains the terms and conditions under which the Interconnection Customer may, interconnect the Generation System to the Area EPS. This Agreement does not authorize the Interconnection Customer to export power or constitute an agreement to purchase or wheel the Interconnection Customer's power. Other services that the Interconnection Customer may require from the Area EPS, or others, may be covered under separate written agreements.
- C) To facilitate the operation of the Generation System, this ~~a~~ Agreement also allows for the occasional and inadvertent export of energy to the Area EPS. The amount, metering, billing and accounting of such inadvertent energy exporting shall be governed by Exhibit D (Operating Agreement) and any applicable tariffs of the Area EPS Operator. This Agreement does not constitute an agreement by the Area EPS Operator to purchase or pay for any energy, inadvertently or intentionally exported, unless expressly noted in Exhibit D or under a separately executed power purchase agreement (PPA).
- D) This ~~a~~ Agreement does not constitute a request for, nor the provision of, any transmission delivery service or any local distribution delivery service.
- E) The Technical Requirements for interconnection are ~~covered~~ described in a separate Technical Requirements document ~~known as, entitled~~ the "State of Minnesota Distributed Generation Interconnection Requirements", a copy of which has been made available to the Interconnection Customer and is incorporated and made part of this Agreement by this reference.

## II. DEFINITIONS

- A) "Area EPS" an electric power system (EPS) that serves Local EPS's. Note: Typically, an Area EPS has primary access to public rights-of-way, priority crossing of property boundaries, etc.

- B) "Area EPS Operator" the entity that operates the Area EPS and is set forth in the first paragraph of this Agreement.
- C) "Dedicated Facilities" the equipment that is installed due to the interconnection of the Generation System and is not required to serve other Area EPS customers.
- D) "EPS" (Electric Power System) facilities that deliver electric power to a load. Note: This may include generation units.
- E) "Extended Parallel" means the Generation System is designed to remain connected with the Area EPS for an extended period of time.
- F) "Generation" any device producing electrical energy, i.e., rotating generators driven by wind, steam turbines, internal combustion engines, hydraulic turbines, solar, fuel cells, etc.; or any other electric producing device, including energy storage technologies.
- G) "Generation Interconnection Coordinator" the person or persons designated by the Area EPS Operator to provide a single point of coordination with the Applicant Interconnection Customer for the gGeneration interconnection process.
- H) "Generation System" the interconnected generator(s), controls, relays, switches, breakers, transformers, inverters and associated wiring and cables, up to the Point of Common Coupling.
- I) "Interconnection Customer" the ~~p~~Party or parties who is set forth in the first paragraph of this Agreement and will own/operate the Generation System and are responsible for meeting the requirements of the agreements and Technical Requirements. This could be the Generation System applicant, installer, owner, designer, or operator.
- J) "Local EPS" an electric power system (EPS) contained entirely within a single premises or group of premises.
- K) "Nameplate Capacity" the total nameplate capacity rating of all the Generation included in the Generation System. For this definition, the "standby" and/or maximum rated kW capacity on the nameplate shall be used.
- L) "Point of Common Coupling" the point where the Local EPS is connected to an Area EPS
- M) "Point of Delivery" the point where the energy changes from the possession from of one party to the other. Typically this will be where the metering is installed, but it is not required that the Point of Delivery is the same as where the energy is metered.
- N) "Technical Requirements" set forth in the "State of Minnesota Requirements for Interconnection of Distributed Generation."

### III. DESCRIPTION OF INTERCONNECTION CUSTOMER'S GENERATION SYSTEM

- A) A description of the Generation System, including a single-line diagram showing the general arrangement of how the Interconnection Customer's Generation System is interconnected with the Area EPS's distribution system, is attached to and made part of this Agreement as Exhibit A. The single-line diagram shows the following;
- 1) Point of Delivery (if applicable);
  - 2) Point of Common Coupling;
  - 3) Location of Mmeter(s);
  - 4) Ownership of the equipment;
  - 5) Generation System total Nameplate Capacity \_\_\_\_\_ kW; and
  - 6) Scheduled operational (on-line) date for the Generation System.

### IV. MISCELLANEOUS RESPONSIBILITIES OF THE PARTIES

- A) The Parties shall perform all obligations of set forth in this Agreement in accordance with all applicable laws and regulations, operating requirements and good utility practices.
- B) Interconnection Customer shall construct, operate and maintain the Generation System in accordance with the applicable manufacturer's recommended maintenance schedule, the Technical Requirements and in accordance with this Agreement.
- C) The Area EPS Operator shall carry out the construction of the Dedicated Facilities in a good and workmanlike manner, and in accordance with standard design and engineering practices.

### V. CONSTRUCTION

The Parties agree to cause their facilities or systems to be constructed in accordance with the laws of the State of Minnesota and to meets or exceeds applicable codes and standards provided by the NESC (National Electrical Safety Code), ANSI (American National Standards Institute), IEEE (Institute of Electrical and Electronic Engineers), NEC (National Electrical Code), UL (Underwriter's Laboratory), Technical Requirements and local building codes and other applicable ordinances in effect at the time of the installation of the Generation System.

#### Charges and payments

The Interconnection Customer is responsible for the actual costs to interconnect the Generation System with the Area EPS, including, but not limited to any Dedicated Facilities attributable to the addition of the Generation System, Area EPS Operator labor

for installation coordination, installation testing and engineering review of the Generation System and interconnection design. Estimates of these costs are outlined in Exhibit B. While estimates, for budgeting purposes, have been provided in Exhibit B, ~~the~~all actual costs are still the responsibility of the Interconnection Customer, even if they exceed the estimated amount(s). All costs, for which the Interconnection Customer is responsible ~~for~~, must be reasonable under the circumstances based on the design and construction.

1) Dedicated Facilities

- a) During the term of this Agreement, the Area EPS Operator shall design, construct and install the Dedicated Facilities outlined in Exhibit B. The Interconnection Customer shall be responsible for paying the actual costs of the Dedicated Facilities attributable to the addition of the Generation System.
- b) Once installed, the Dedicated Facilities shall be owned and operated by the Area EPS Operator~~owner~~, and all costs associated with the operating and maintenance of the Dedicated Facilities, after the Generation System is operational, shall be the responsibility of the Area EPS Operator, unless otherwise agreed.
- c) By executing this Agreement, the Interconnection Customer grants permission for the Area EPS Operator to begin construction and to procure the necessary facilities and equipment to complete the installation of the Dedicated Facilities, as outlined in Exhibit B. If for any reason, the Generation System project is canceled or modified, so that any or all of the Dedicated Facilities are not required, the Interconnection Customer shall be responsible for all costs incurred by the Area EPS Operator, including, but not limited to the additional costs to remove and/or complete the installation of the Dedicated Facilities. Subject to the terms of this paragraph and its responsibility for all associated costs, ~~the~~ Interconnection Customer may, for any reason, cancel the Generation System project, so that any or all of the Dedicated Facilities are not required to be installed. The Interconnection Customer shall provide written notice to the Area EPS Operator of such cancellation. Upon receipt of a cancellation notice, the Area EPS Operator shall take commercially reasonable steps to minimize additional costs to the Interconnection Customer, where reasonably possible.

2) Payments

- a) The Interconnection Customer shall provide reasonable and adequate assurances of credit for its obligations under this Agreement, including but not limited to a letter of credit or personal guaranty of payment and performance from a creditworthy entity acceptable under the Area EPS Operator's credit policy and procedures for the unpaid balance of the estimated amount shown in Exhibit B.
- b) The payment by Interconnection Customer to Area EPS Operator for the costs outlined in Exhibit B, shall be as follows:
  - i. 1/3 of estimated costs, outlined in Exhibit B, shall be due upon execution of this aAgreement.
  - ii. 1/3 of estimated costs, outlined in Exhibit B, shall be due prior to initial energization of the Generation System, with the Area EPS.

- iii. Remainder of actual costs, incurred by the Area EPS Operator, shall be due within 30 days from the date the bill is mailed by the Area EPS Operator after project completion.

## VI. DOCUMENTS INCLUDED WITH THIS AGREEMENT.

- A) This aAgreement includes the following exhibits, which are specifically incorporated herein and made part of this Agreement by this reference: *(if any of these Exhibits are deemed not applicable for this Generation System installation they may be omitted from the final -Agreement by the Area EPS Operator.)*
- 1) Exhibit A – Description of Generation System and single-line diagram. This diagram shows all major equipment, including, visual isolation equipment, Point of Common Coupling, Point of Delivery for Generation Systems that intentionally export, ownership of equipment and the location of metering.
  - 2) Exhibit B – Estimated installation and testing costs payable by the Interconnection Customer. Included in this listing shall be the description and estimated costs for the required Dedicated Facilities being installed by the Area EPS Operator for the interconnection of the Generation System and a description and estimate for the final acceptance testing work to be done by the Area EPS Operator.
  - 3) Exhibit C – Engineering Data Submittal – A standard form that provides the engineering and operating information about the Generation System.
  - 4) Exhibit D – Operating Agreement – This provides specific operating information and requirements for this Generation System interconnection. This Exhibit has a separate signature section and may be modified, in writing, from time to time with the agreement of both parties.
  - 5) Exhibit E – Maintenance Agreement – This provides specific maintenance requirements for this Generation System interconnection. This Exhibit has a separate signature section and may be modified, in writing, from time to time with the agreement of both parties.

## VII. TERMS AND TERMINATION

- A) This Agreement shall become effective as of the date when both the Interconnection Customer and the Area EPS Operator have both signed this Agreement. The Agreement shall continue in full force and effect until the earliest date that one of the following events occurs:
- 1) The Parties agree in writing to terminate the Agreement; or
  - 2) The Interconnection Customer may terminate this aAgreement at any time, by written notice to the Area EPS Operator, at any time prior to the completion of the final acceptance testing of the Generation System by the Area EPS Operator. Once the Generation System is operational, then Section VII.A.3 of this Agreement applies. Upon receipt of a cancellation notice, the Area EPS Operator shall take commercially reasonable steps to minimize additional costs to the Interconnection Customer, where reasonably possible; or



- 3) Once the Generation System is operational, the Interconnection Customer may terminate this aAgreement after 30 days written notice to the Area EPS Operator, unless otherwise agreed to within the Exhibit D, Operating Agreement; or
- 4) The Area EPS Operator may terminate this aAgreement after 30 days written notice to the Interconnection Customer if:
  - a) The Interconnection Customer fails to interconnect and operate the Generation System per the terms of this Agreement; or
  - b) The Interconnection Customer fails to pay any amounts due to the Area EPS Operator within 30 days after the date of the Area EPS Operator's notice of such failure to pay; or
  - b)c) The Interconnection Customer fails to take all corrective actions specified in the Area EPS's written notice that the Generation System is out of compliance with the terms of this Agreement, within the time frame set forth in such notice; or
  - e)d) If tThe Interconnection Customer fails to complete the Area EPS Operator's final acceptance testing of the generation system within 24 months of the date proposed under section III.A.5; or
  - e) The Interconnection Customer breaches any other material obligation under this Agreement and such breach continues for a period of 3 business days after the date of Area EPS Operator's notice of such breach.
- B) Upon termination of this Agreement the Generation System shall be disconnected from the Area EPS. The termination of this Agreement shall not relieve either Party of its liabilities and obligations, owed or continuing, at the time of the termination.

## VIII. OPERATIONAL ISSUES

Each Party will, at its own cost and expense, operate, maintain, repair and inspect, and shall be fully responsible for, the facilities which it now owns, or hereafter may own, unless otherwise specified in a written agreement executed by the Parties.

- A) Technical Standards: The Generation System shall be installed and operated by the Interconnection Customer consistent with the requirements of this Agreement; the Technical Requirements; the applicable requirements located in the National Electrical Code (NEC); the applicable standards published by the American National Standards Institute (ANSI) and the Institute of Electrical and Electronic Engineers (IEEE); and local building and other applicable ordinances in effect at the time of the installation of the Generation System.
- B) Right of Access: At all times, the Area EPS Operator's personnel shall have access to the disconnect switch of the Generation System for any reasonable purpose in connection with the performance of the obligations imposed on it by this Agreement, to meet its obligation to operate the Area EPS safely and to provide service to its customers. If the Area EPS Operator deems it necessary for the purposes of this Agreement or its obligation to provide service to its customers, the Interconnection Customer shall allow the Area EPS Operator access to the Area EPS's equipment and facilities located on the premises.

- C) Electric Service Supplied: The Area EPS Operator will supply the electrical requirements of the Local EPS that are not supplied by the Generation System. Such electric service shall be supplied, to the Interconnection Customer's Local EPS, under the rate schedules applicable to the Customer's class of service as revised from time to time by the Area EPS Operator.
- D) Operation and Maintenance: The Generation System shall be operated and maintained, by the Interconnection Customer in accordance with the Technical Standards Requirements and any additional requirements of Exhibit D and Exhibit E, attached to this document, as amended, in writing, from time to time.
- E) Cooperation and Coordination: Both the Area EPS Operator and the Interconnection Customer shall communicate and coordinate their operations, so that the normal operation of the Area EPS does not unduly effect or interfere with the normal operation of the Generation System, and the Generation System does not unduly effect or interfere with the normal operation of the Area EPS. Under abnormal operations of either the Generation System or the Area EPS system, the responsible Party shall provide reasonably timely communication to the other Party to allow mitigation of any potentially negative effects of the abnormal operation of their system.
- F) Disconnection of Unit: The Area EPS Operator may disconnect the Generation System as necessary, for termination of this Agreement; non-compliance with this Agreement; system emergency, imminent danger to the public or Area EPS personnel; routine maintenance, repairs and modifications to the Area EPS. When reasonably possible, the Area EPS Operator shall provide prior notice to the Interconnection Customer explaining the reason for the disconnection. If prior notice is not reasonably possible the Area EPS Operator shall after the fact, provide information to the Interconnection Customer as to why the disconnection was required. It is agreed that the Area EPS Operator shall have no liability for any loss of sales or other damages, including all consequential damages for the loss of business opportunity, profits or other losses, regardless of whether such damages were foreseeable, for the disconnection of the Generation System per this Agreement. The Area EPS Operator shall expend reasonable effort to reconnect the Generation System in a timely manner and to work towards mitigating damages and losses to the Interconnection Customer where reasonably possible.
- G) Modifications to the Generation System – ~~When reasonably possible~~ ~~the~~ Interconnection Customer shall notify the Area EPS Operator, in writing, of plans for any modifications to the Generation System interconnection equipment, including all information needed by the Area EPS Operator as part of the review described in this paragraph, at least twenty (20) business days prior to undertaking such modification(s). Modifications to any of the interconnection equipment, including, all interconnection required protective systems, the Generation control systems, the transfer switches/breakers, interconnection protection VT's & CT's, and Generation System capacity, shall be included in the notification to the Area EPS Operator. ~~When reasonably possible~~ ~~the~~ Interconnection Customer agrees not to commence installation of any modifications to the Generating System until the Area EPS Operator has approved the modification, in writing, which approval shall not be unreasonably withheld or delayed. The Area EPS Operator shall have a minimum of five (5) business days to review and respond to the planned modification. The Area EPS Operator shall not take longer than a maximum of ten (10) business days, to review and respond to the modification after the receipt of the information required to review the modifications. When it is not reasonably possible for the Interconnection Customer to provide prior written notice as specified above, the Interconnection Customer shall ~~provide written notice to~~ notify the Area EPS Operator as soon as reasonably possible, ~~after~~ and receive Area EPS Operator approval before the completion commencement of the modification(s).

- H) Permits and Approvals: The Interconnection Customer shall obtain all environmental and other permits lawfully required by governmental authorities prior to the construction of the Generation System. The Interconnection Customer shall also maintain these applicable permits and compliance with these permits during the term of this Agreement.

## IX. LIMITATION OF LIABILITY

- A) Each Party shall at all times indemnify, defend, and save the other Party harmless from any and all damages, losses, claims, including claims and actions relating to injury or death of any person or damage to property, costs and expenses, reasonable attorneys' fees and court costs, arising out of or resulting from the Party's performance of its obligations under this aAgreement, except to the extent that such damages, losses or claims were caused by the negligence or intentional acts of the other Party.
- B) Each Party's liability to the other Party for failure to perform its obligations under this Agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either Party be liable to the other Party for any punitive, incidental, indirect, special, or consequential damages of any kind whatsoever, including for loss of business opportunity or profits, regardless of whether such damages were foreseen.
- C) Notwithstanding any other provision in this Agreement, with respect to Area EPS Operator's provision of electric service to any customer including the Interconnection Customer, the Area EPS Operator's liability to such customer shall be limited as set forth in the Area EPS Operator's tariffs and terms and conditions for electric service, and shall not be affected by the terms of this Agreement.

## X. DISPUTE RESOLUTION

- A) Each Party agrees to attempt to resolve all disputes arising hereunder promptly, equitably and in a good faith manner.
- B) In the event a dispute arises under this Agreement, and if it cannot be resolved by the Parties within thirty (30) days after written notice of the dispute to the other Party, the Parties agree to submit the dispute to mediation by a mutually acceptable mediator, in a mutually convenient location in the State of Minnesota. The Parties agree to participate in good faith in the mediation for a period of 90 days. If the pParties are not successful in resolving their disputes through mediation, then the Parties may refer the dispute for resolution to the Minnesota Public Utilities Commission (MPUC), which shall maintain continuing jurisdiction over this Agreement.

## XI. INSURANCE

- A) In connection with the Interconnection Customer's performance of its duties and obligations under this Agreement, the Interconnection Customer shall maintain, during the term of the Agreement, general liability insurance, from a qualified insurance agency with a B+ or better rating by "Best" and with a combined single limit of not less than:
- 1) Two million dollars (\$2,000,000) for each occurrence if the Gross-Nameplate CapacityRating of the Generation System is equal to or greater than 250kW.
  - 2) One million dollars (\$1,000,000) for each occurrence if the Gross-Nameplate CapacityRating of the Generation System is between 40kW and 250kW.

- 3) Three hundred thousand dollars (\$300,000) for each occurrence if the Gross Nameplate RatingCapacity of the Generation System is equal to or less than 40kW.
  - 4) SA t a minimum, such general liability insurance shall include coverage against claims for damages resulting from (i) bodily injury, including wrongful death; and (ii) property damage arising out of the Interconnection Customer's ownership and/or operating of the Generation System under this aAgreement.
- B) The general liability insurance required shall, by endorsement to the policy or policies, (a) include the Area EPS Operator as an additional insured; (b) contain a severability of interest clause or cross-liability clause; (c) provide that the Area EPS Operator shall not by reason of its inclusion as an additional insured incur liability to the insurance carrier for the payment of premium for such insurance; and (d) provide for not less than thirty (30) calendar days' written notice to the Area EPS Operator prior to cancellation, termination, alteration, or material change of such insurance.
  - C) If the Generation System is connected to an account receiving residential service from the Area EPS Operator and its total generating capacity is smaller than 40kW, then the endorsements required in Section XI.B above shall not apply.
  - D) The Interconnection Customer shall furnish the required insurance certificates and endorsements to the Area EPS Operator prior to the initial operation of the Generation System. Thereafter, the Area EPS Operator shall have the right to periodically inspect or obtain a copy of the original policy or policies of insurance
  - E) Evidence of the insurance required in Section XI.A. shall state that the coverage provided is primary and is not excess to, or contributing with, any insurance or self-insurance maintained by the Area EPS Operator.
  - F) If the Interconnection Customer is self-insured with an established record of self-insurance, the Interconnection Customer may comply with the following in lieu of Section XI.A – E:
    - 1) Interconnection Customer shall provide to the Area EPS Operator, at least thirty (30) days prior to the date of initial operation, evidence of an acceptable plan to self-insure to a level of coverage equivalent to that required under sSection XI.A; and
    - 2) If Interconnection Customer ceases to self-insure to the level required hereunder Section XI.A, or if the Interconnection Customer is unable to provide continuing evidence of it's ability to self-insure, -the Interconnection Customer agrees to immediately obtain the coverage required under Section XI.A and comply with all other requirements set forth in Section XI.A-E.
  - G) Failure of the Interconnection Customer or Area EPS Operator to enforce the minimum levels of insurance does not relieve the Interconnection Customer from maintaining such levels of insurance or relieve the Interconnection Customer of any liability.
  - H) All insurance certificates, statements of self-insurance, endorsements, cancellations, terminations, alterations, and material changes of such insurance shall be issued and submitted to the following:

Your Friendly Area EPS  
Attention: Manager of Generation Insurance

12345 Utility Drive.  
Anytown, MN 55000

## XII. MISCELLANEOUS

### A) FORCE MAJEURE

- 1) An event of Force Majeure means any act of God, act of the public enemy, act of terrorism, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any curtailment, order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party's control. An event of Force Majeure does not include an act of negligence or intentional wrongdoing. Neither Party will be considered in default as to any obligation hereunder if such Party is prevented from fulfilling the obligation due to an event of Force Majeure. However, a Party whose performance under this Agreement is hindered by an event of Force Majeure shall make all reasonable efforts to perform its obligations hereunder
- 2) Neither Party will be considered in default of any obligation hereunder if such Party is prevented from fulfilling the obligation due to an event of Force Majeure. However, a Party whose performance under this Agreement is hindered by an event of Force Majeure shall make all reasonable efforts to perform its obligations hereunder. .

### B) NOTICES

- 1) Any written notice, demand, or request required or authorized in connection with this Agreement ("Notice") shall be deemed properly given if delivered in person or sent by first class mail, postage prepaid, to the person specified below:
  - a) If to Area EPS Operator  
Your Friendly Area EPS  
Attention: Generation Interconnection Coordinator  
12345 Utility Drive.  
Anytown, MN 55000
  - b) If to Interconnection Customer  
A Friendly Interconnection Customer  
Attention: Generation Coordinator  
12345 Interconnection Drive.  
Anytown, MN 55000
- 2) A Party may change its address for notices at any time by providing the other Party written notice of the change, in accordance with this Section.
- 3) The Parties may also designate operating representatives to conduct the daily communications which may be necessary or convenient for the administration of this Agreement. Such designations, including names, addresses, and phone numbers may be communicated or revised by one Party's notice to the other Party.

**C) ASSIGNMENT**

The Interconnection Customer shall not assign its rights nor delegate its duties under this Agreement without the Area EPS Operator's written consent. Any assignment or delegation the Interconnection Customer makes without the Area EPS Operator's written consent shall not be valid. The Area EPS Operator shall not unreasonably withhold its consent to the ~~Generating Entities~~ Interconnection Customer's requested assignment of this Agreement.

**D) NON-WAIVER**

None of the provisions of this Agreement shall be considered waived by a Party unless such waiver is given in writing. The failure of a Party to insist in any one or more instances upon strict performance of any of the provisions of this Agreement or to take advantage of any of its rights hereunder shall not be construed as a waiver of any such provisions or the relinquishment of any such rights for the future, but the same shall continue and remain in full force and effect.

**E) GOVERNING LAW AND INCLUSION OF AREA EPS OPERATOR'S TARIFFS AND RULES.**

- 1) This Agreement shall be interpreted, governed and construed under the laws of the State of Minnesota as if executed and to be performed wholly within the State of Minnesota without giving effect to choice of law provisions that might apply to the law of a different jurisdiction.
- 2) The interconnection and services provided under this Agreement shall at all times be subject to the terms and conditions set forth in the tariff schedules and rules applicable to the generation interconnection and electric service provided by the Area EPS Operator and as amended from time to time, which tariff schedules and rules are hereby incorporated into this Agreement by this reference.
- 3) Notwithstanding any other provisions of this Agreement, -the Area EPS Operator shall have the right to unilaterally file with the MPUC, -pursuant to the MPUC's rules and regulations, or any other governing regulatory body, an application for change in rates, charges, classifications, services, tariffs or rules or any agreements relating thereto.

**F) AMENDMENT AND MODIFICATION**

This Agreement can ~~only~~ be amended or modified only by a writing signed by both Parties.

**G) ENTIRE AGREEMENT**

This Agreement, including all attachments, exhibits, and appendices, constitutes the entire Agreement between the Parties with regard to the interconnection of the Generation System of the Parties at the Point(s) of Common Coupling expressly provided for in this Agreement and supersedes all prior agreements or understandings related to such interconnection, whether ~~verbal~~ oral or written. It is expressly acknowledged that the Parties may have other agreements covering other services not expressly provided for herein, which agreements are unaffected by this Agreement. Each pParty also represents that in entering into this Agreement, it has not relied on the promise, inducement, representation, warranty, agreement or other statement not set forth in this Agreement ~~or in~~ including the incorporated attachments, exhibits and appendices.

**H) CONFIDENTIAL INFORMATION**

Except as otherwise agreed or provided herein, each Party shall hold in confidence, and shall not disclose, confidential information, to any person (except employees, officers, representatives and agents, who agree to be bound by this sSection). Confidential information shall be clearly marked as such on each page or otherwise affirmatively identified. If a court, government agency or entity with the right, power, and authority to do so, requests or requires either Party, by subpoena, oral disposition, interrogatories, requests for production of documents, administrative order, or otherwise, to disclose Confidential information, that Party shall provide the other Party with prompt notice of such request(s) or requirements(s) so that the other Party may seek an appropriate protective order or waive compliance with the terms of this Agreement. In the absence of a protective order or waiver, the Party shall disclose only that such confidential information which, in the opinion of its counsel, the pParty is legally compelled to disclose. Each Party will use reasonable efforts to obtain reliable assurance that confidential treatment will be accorded any confidential information so furnished.

**I) NON-WARRANTY**

Neither by inspection, if any, or non-rejection, nor in any other way, does the Area EPS Operator give any warranty, expressed or implied, to the Interconnection Customer or any third party as to the adequacy, safety, fitness for a particular purpose or other characteristics of any structures, equipment, wires, appliances or devices owned, installed or maintained by the Interconnection Customer or leased by the Interconnection Customer from third parties, including without limitation the Generation System and including without limitation any structures, equipment, wires, appliances or devices appurtenant thereto.

**J) NO PARTNERSHIP.**

This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon either Party. Neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

**XIII. SIGNATURES**

IN WITNESS WHEREOF, the Parties hereto have caused two originals of this Agreement to be executed by their duly authorized representatives. This Agreement is effective as of the last date set forth below.

Interconnection Customer

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Area EPS Operator

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_



**EXHIBIT A –  
GENERATION SYSTEM DESCRIPTION AND SINGLE-LINE  
DIAGRAM.**

**EXHIBIT B –  
SUMMARY OF AREA EPS COSTS AND DESCRIPTION OF  
DEDICATED FACILITIES BEING INSTALLED BY THE AREA EPS  
OPERATOR FOR THE INTERCONNECTION OF THE  
GENERATION SYSTEM.**

This Exhibit shall provide the estimated total costs, that will be the responsibility of the Interconnection Customer. It is assumed that the initial application has been filed and the engineering studies have been paid for and completed. So those costs are not included on this listing.

What is listed below is a general outline of some of the major areas where costs could occur. Other costs than those listed below may be included by the Area EPS Operator, provided that those costs are a direct result from the Interconnection Customer's request to interconnect the Generation System. The following list is only a guideline and each Area EPS Operator, for each installation, will be creating a unique Exhibit B, that is tailored for that specific Generation System interconnection.

- A) Dedicated Facilities (equipment, design and installation labor)
- B) Monitoring & Control System (equipment, design and installation labor)
- C) Design Coordination and Review
- D) Construction Coordination labor costs
- E) Testing (development of tests and physical testing)
- F) Contingency

## **EXHIBIT C – ENGINEERING DATA SUBMITTAL**

**Attach a completed Engineering Data Submittal form**

**from Appendix C of “State of Minnesota Interconnection Process for Distributed Generation Systems” document**

## EXHIBIT D – OPERATING AGREEMENT

Each Generation System interconnection will be unique and will require a unique Operating Agreement. The following is a listing of some of the possible areas that will be covered in such an Operating Agreement. The following areas have not been developed into a standard agreement due to the unique nature of each Generation System. It is envisioned that this Exhibit will be tailored by the Area EPS Operator for each Generation System interconnection. It is also intended that this Operating Agreement Exhibit will be reviewed and updated periodically, to allow the operation of the Generation System, to change to meet the needs of both the Area EPS Operator and the Interconnection Customer, provided that the change does not negatively affect the other Party. There may also be operating changes required by outside issues, such as changes in FERC and MISO requirements and/or policies which will require this Operating Agreement to be modified.

The following items are provided to show the general types of items which that may be included in this Operating Agreement. The items included in the Operating Agreement shall not be limited to the items shown on this list.

- A) Applicable Area EPS Tariffs – discussion on which tariffs are being applied for this installation and possibly how they will be applied.
- B) Var Requirements – How will the Generation System be required to operate so as to control the power factor of the energy flowing in either direction across the interconnection?
- C) Inadvertent Energy – This Operating Agreement needs to provide the method(s) that will be used to monitor, meter and account for the inadvertent energy used or supplied by the Generation System. Tariffs and operating rules that apply for this Generation System interconnection shall be discussed in this Operating Agreement.
- D) Control Issues - Starting and stopping of the generation, including the remote starting and stopping, if applicable.
- E) Dispatch of Generation Resources - What are the dispatch requirements for the Generation System? Can it only-run only during Peak Hours? Are there a limited number of hours that it can run? Is it required to have met an availability percentage? The answers to these questions is-will greatly depend upon the PPA and other requirements. Is the Interconnection Customer required to coordinate outages of the Generation System, with the Area EPS?
- F) Outages of Distribution System – How are emergency outages handled? How are other outages scheduled? If the Interconnection Customer requires the Area EPS Operator to schedule the outages during after-hours, who pays for the Area EPS Operator's overtime?
- G) Notification / Contacts - Who should be notified? How should they be notified? When should they be notified? For what reasons, should the notification take place?
  - 1) Starting of the Generation
  - 2) Dispatching of Generation

3) Notification of failures (both Area EPS and Generation System failures)

- H) Documentation of Operational Settings – How much fuel will the gGeneration System typically have on hand? How long can it run with this fuel capacity? How is the gGeneration sSystem set to operate for a power failure? These may be issues that should be documented in the Operating Agreement. The following are a couple of examples:
- 1) "The Generation System will monitor the Area EPS phase voltage and after 2 seconds of any phase voltage below 90% the gGeneration will be started and the load transferred to the generator, if the gGeneration is not already running."
  - 2) "The Generation System will wait for 30 minutes after it senses the return of the Area EPS frequency and voltage, before it will automatically reconnect to the Area EPS."
- I) Cost of testing for future failures – If a component of the Generation System fails or needs to be replaced, which eaffects the interconnection with the Area EPS, what is the process for retesting, and for replacement? Who pays for the additional costs of the Area EPS Operator to work with the Interconnection Customer to resolve these problems and/or to complete retesting of the modified equipment?
- J) Right of Access: At all times, the Area EPS Operator shall have access to the disconnect switch of the Generation System for any reasonable purpose in connection with the performance of the obligations imposed on it by theis Operating Agreement, to meet its obligation to operate the Area EPS safely and to provide service to its customers, at all times. If necessary for the purposed of this Agreement, the Interconnection Customer shall allow the Area EPS Operator access to the Area EPS's equipment and facilities located on the premises.

**[NOTE: Right of Access is already included in the Interconnection Agreement itself – this language should be in only one place.]**

Add Signature Section - The Operating Agreement should be set up so that it is individually signed and dated by both pParties.

## EXHIBIT E – MAINTENANCE AGREEMENT

Each Generation System interconnection will be unique and will require a unique Maintenance Agreement. It is envisioned that this Exhibit will be tailored for each Generation System interconnection. It is also intended that this Maintenance Agreement Exhibit will be reviewed and updated periodically, to allow the maintenance of the Generation System be allowed to change to meet the needs of both the Area EPS Operator and the Interconnection Customer, provided that such change does not negatively affect the other Party. There may also be changes required by outside issues, such as changes in FERC and MISO requirements and/or policies which will require this Maintenance Agreement to be modified.

### A) Routine Maintenance Requirements –

- 1) ~~Who is providing maintenance~~ – Contact information for the entity providing maintenance
- 2) Periods of maintenance

- B) Modifications to the Generation System - The Interconnection Customer shall notify the Area EPS Operator, in writing of plans for any modifications to the Generation System interconnection equipment at least twenty (20) business days prior to undertaking such modification. Modifications to any of the interconnection equipment, including all required protective systems, the generation control systems, the transfer switches/breakers, VT's & CT's, generating capacity and associated wiring shall be included in the notification to the Area EPS Operator. The Interconnection Customer agrees not to commence installation of any modifications to the Generating System until the Area EPS Operator has approved the modification, in writing. The Area EPS shall have a minimum of five (5) business days and a maximum of ten (10) business days, to review and respond to the modification, after the receipt of the information required to review the modifications.

**[NOTE: Modifications to the Generation System by the IC have already been addressed in the Interconnection Agreement. The language should occur in only one place.]**

Add signature Section.....