

**APPENDIX 17 TO GIP**  
**FACILITIES STUDY FOR NETWORK UPGRADES TO AFFECTED SYSTEM**

**Between**  
**MIDCONTINENT INDEPENDENT SYSTEM OPERATOR, INC.**

**And**  
**MISO TO**  
**And**  
**AFFECTED SYSTEM OPERATOR NAME**

[Insert NU(s) to be studied]

**THIS AGREEMENT** ("Agreement") is made effective as of the [Insert Date], between the **Midcontinent Independent System Operator, Inc.**, a non-profit, non-stock corporation organized and existing under the laws of the State of Delaware ("MISO"), MISO TO ("Abbreviation, if applicable" or "MISO Transmission Owner") and **AFFECTED SYSTEM OPERATOR NAME** ("Abbreviation, if applicable" or "Company"). This Agreement is executed between the Parties to facilitate the provision of services relating to Network Upgrades to Affected System listed in Attachment A attached hereto (the "Project(s)") from the MISO Interconnection System Impact Study for Affected System for [CYCLE]. MISO, MISO Transmission Owner, and Company each may be referred to individually as a "Party" or collectively as the "Parties."

**RECITALS**

**WHEREAS**, MISO administers Generator Interconnections Procedures ("GIP") pursuant to Attachment X to the MISO Open Access Transmission, Energy and Operating Reserve

Markets Tariff ("Tariff") to process requests to interconnect generation facilities to the MISO Transmission System; or

**WHEREAS**, Company administers interconnection procedures to process requests to interconnect generation facilities to the Company's Transmission System or Distribution System; and

**WHEREAS**, certain additions, modifications and upgrades, if applicable, must be made to certain existing facilities of the transmission system to accommodate such interconnection; and

**WHEREAS**, the MISO Transmission Owner will perform one or more of the following pursuant to the Projects, referred to as the "Study":

\_\_\_\_\_ Facilities Study for Network Upgrades to Affected System

\_\_\_\_\_ Restudy

(specify): \_\_\_\_\_; or

\_\_\_\_\_ Other

(specify): \_\_\_\_\_; and

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained in this Agreement, it is agreed:

- 1.0 Unless otherwise defined herein, terms used in this Agreement with initial capitalization shall have the meaning assigned to such term in Attachment X (GIP) of the MISO Tariff.
- 2.0 The Parties will perform the Study in accordance with its procedures for Affected System Studies.

- 3.0 The scope of the Study shall be subject to the assumptions set forth in Attachment A to this Agreement.
- 4.0 The Parties hereby designate the interconnection customers associated with the Projects listed in Attachment A as third-party beneficiaries of this Agreement.
- 5.0 The Parties agree to coordinate in providing each other data, resolve any disputes between the Parties and any third-party beneficiary, and respond to any questions from third parties about the Study consistent with Good Utility Practice.
- 6.0 MISO Transmission Owner's reasonable cost estimate to perform the Study is \$ [dollars]. The estimated cost is a good faith estimate of the costs to perform the Study. The Parties acknowledge that the estimate may be revised as provided in the Tariff. The Company shall reimburse the other Parties in full for performing the Study. These reimbursements shall include payment for all actual costs of the Study.
- 7.0. The Company, with this Study Agreement, shall submit a refundable deposit in the amount of \$ [dollars] (the " Deposit"). The Deposit will be applied toward the costs of the Study. The Company shall prepay the costs of any study, analysis and review work performed by or on behalf of MISO and MISO Transmission Owner to the extent such costs exceed the Deposit. There will be a refund to the Company the portion of the Deposit that exceeds the amount of the costs for the Study. MISO shall invoice the Company, from time to time, for the amount(s) by which the costs for the Study exceed the amount of the Deposit and any prepayments. The Company shall pay any such invoice within thirty (30) days of receipt.
- 8.0 MISO and MISO Transmission Owner agree to use reasonable efforts to complete the Study and provide a final report by the later of: (1) ninety (90) days from the date all necessary

information and documents are received. MISO will provide notice and reasonable justification if the date must be extended.

9.0. Payment will be coordinated between the following parties:

AFFECTED SYSTEM OPERATOR NAME	MISO
[Title], [Department]	Director, Finance and Accounting
[Address Line 1]	720 City Center Drive
[Address Line 2]	Carmel, IN 46032
Telephone: [number]	Telephone: 317-249-5525
Email: [Add Email]	Email: <a href="mailto:APIInvoice@misoenergy.org">APIInvoice@misoenergy.org</a>
	<a href="mailto:GI-AFS@misoenergy.org">Email: GI-AFS@misoenergy.org</a>

10.0 The Parties acknowledge and agree that, in performing the Study, the Parties will have access to and receive information of a confidential nature from the Parties, transmission owners, and Projects. The Parties agree to maintain the confidentiality of any such information in accordance with the terms of the Universal Non-Disclosure Agreement executed between AFFECTED SYSTEM OPERATOR NAME and MISO, effective [Date].

11.0 This Agreement is not intended to alter or amend any existing agreement between the Parties, but is intended to confirm the terms under which MISO, MISO Transmission Owner and the Company will coordinate with respect to the Study for the Projects listed in Attachment A.

12.0 Miscellaneous. Each Party shall perform its obligations in accordance with their Tariff and Business Practices Manuals.

13.0 Term of Agreement. This Agreement shall remain in effect until the conclusion of all applicable Study(ies) or upon termination of this Agreement in accordance with Section 14.0.

- 14.0 Termination Procedures. A Party may terminate this Agreement at any time prior to the initiation of the Study(ies) with written notice to the other Party. This Agreement may be terminated prior to the initiation of the Study(ies) if either 1) the Company fails to pay the applicable Study Deposit within 30 days of the execution of this Agreement or 2) the Company fails to timely provide any information requested by MISO or MISO Transmission Owner.
- 15.0 If the MISO Transmission Owner does not meet the study deadlines contained in the GIP, applicable JOA/JPA and other agreements filed with the Commission, the MISO Transmission Owner shall be subject to the financial penalties as described in Attachment X (GIP) of the MISO Tariff Section 3.9.
- 16.0 Upon making a determination that expanded scope is needed for the Facilities Study for Network Upgrades to Affected System or a Facilities Study for Network Upgrades to Affected System Restudy is necessary ("Further Study"), MISO may send a request by electronic mail to the Company requesting a quote to perform the Further Study or confirmation of an earlier quote ("Quote Request Email"). The Quote Request Email shall contain the following information: (1) the name of the projects to be studied, and, if applicable, the study cycle; (2) any models or data intended for use in the Further Study, (3) the deadline by which the Further Study is to be completed and delivered, and (4) such other information deemed advisable to include. If MISO requires additional information to issue a quote or perform the Further Study, MISO shall request such additional information within five (5) business days after receiving the Quote Request Email. Within five (5) business days after the date of the transmitted Quote Request Email or, if applicable, five (5) business days

after the date of the further information requested email, the MISO will transmit by electronic mail to the Company an estimated total cost for the Further Study requested in the Quote Request Email and a statement of the estimated completion date (“Quote Response Email”). The Parties shall indicate acceptance of the terms specified in the Quote Response Email by providing a Statement of Work for Further Study in the form of Attachment B by electronic mail. The Parties shall indicate acceptance of the terms specified in Attachment B by electronic mail and such acceptance shall create a binding agreement between MISO, MISO Transmission Owner and the Company.

- a. In accordance with Indiana’s Uniform Electronic Transactions Act (I.C. 26-2-8-101 *et seq.*), the Parties agree to transact business electronically for purposes of forming binding agreements to perform the Further Study. For purposes of Section 10, all electronic mail correspondence regarding the Further Study shall be directed to the Authorized Representative(s) identified by MISO and the Company respectively in Section 10(b) of this Agreement. Notwithstanding any other provision herein, the parties agree that any commitments, estimates, and authorizations issued or agreed to by each party’s Authorized Representative relating to the Further Study shall be binding upon the Authorized Representative’s party without need for any further writing provided that the following conditions are met:
  - i. The offer, acceptance, or representation displays an electronic mail address matching one of the electronic mail addresses listed in Section 10(b) of this Agreement, as may be amended;

- ii. The offer, acceptance, or representation is addressed to an electronic mail address matching one of the electronic mail addresses listed for the other party in Section 10(b) of this Agreement, as may be amended;
- iii. The terms are contained in the form of Attachment B included in the electronic mail specified in Section 10 of this Agreement; and
- iv. The acceptance of an offered Statement of Work for Further Study includes a .PDF format Statement of Work in the form of Attachment B with the “Acknowledgment” box checked and no terms changed from the Statement of Work submitted by the Authorized Representative of the other party. A purported acceptance that varies the terms of the offer shall be deemed a counteroffer.

If all of the foregoing conditions are met, the displayed electronic mail address of the sending party’s Authorized Representative shall constitute the Authorized Representative’s signature and the other party may rely on it as a signed writing capable of binding the sending party absent actual knowledge that the electronic mail was not in fact sent by the other party.

- b. The Parties designate the following individual(s) to act as their Authorized Representatives, to issue and/or accept terms, quotes, and authorizations regarding the Further Study:

- i. For MISO:

- (1) [First and Last Name], [Title], [Department], [Phone Number], [EMAIL]
- (2) [First and Last Name], [Title], [Department], [Phone Number], [EMAIL]

- ii. For Company:

- (1) [First and Last Name], [Title], [Department], [Phone Number], [EMAIL]
- (2) [First and Last Name], [Title], [Department], [Phone Number], [EMAIL]

Either Party may change their Authorized Representative or update information by sending a written notice to the other party stating the change and providing updated contact information by certified mail. Such changes shall not be deemed amendments to this Agreement and shall be effective ten (10) Business Days after mailing or at such earlier time as the receiving party acknowledges receipt of the written notice.



**IN WITNESS WHEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year written below.

**Company**

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

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

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

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

**MISO Transmission Owner**

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

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

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

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

**Midcontinent Independent**

**System Operator, Inc.**

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

MISO  
FERC Electric Tariff  
ATTACHMENTS

Attachment X: Appendix 17  
Facilities Study for Network Upgrades to Affected System  
31.0.0

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

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

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

### **Attachment A**

The Study shall be based upon Network Upgrades to Affected System supplied by the MISO Interconnection System Impact Study for Affected System for [CYCLE]. Unless otherwise waived, the Parties shall submit information pursuant to this Agreement, and as otherwise determined to be reasonable and appropriate to complete an accurate and timely Study.

#### **Objective and Scope:**

The Facilities Study for Network Upgrades to Affected System identifies the cost estimates and time required to construct the Network Upgrade Facilities. The scope of the Study includes all of the following:

- Design and specification of facility improvements in accordance with Good Utility Practice and applicable planning and design criteria. These criteria must be consistently applied to all existing and proposed generation projects in a Local Balancing Authority (“LBA”).
- Development of the detailed cost estimates that include equipment, engineering, procurement and construction costs according to the level of accuracy possible based on the proposed in-service date of the projects.
- Identification of the electrical switching configuration of the connection equipment, including, but not limited to the transformer, switchgear, meters, and other station equipment.

- Identification of the nature and estimated cost of any Network Upgrades, System Protection Facilities and Distribution Upgrades on the Transmission System necessary to accomplish the interconnection.
- An estimate of the time required to construct facilities and required phasing of improvements, if any.
- Preparation of the draft Appendices to the Interconnection Agreement/Facilities Construction Agreements with completed exhibits.
- The appropriate Exhibits shall be included from below.

### **Study Requirements**

MISO Transmission Owner shall perform the Study in accordance with MISO's procedures and criteria, and the Transmission Owner's reliability criteria. To the extent applicable, MISO Transmission Owner will use existing studies available to MISO Transmission Owner in performing the Study.

### **Description of the Work:**

MISO Transmission Owner shall perform the Facilities Study for Network Upgrades to Affected System identified in table below and described herein to determine the Network Upgrades to Affected System.

### **The Projects:**

<b>Constraint</b>	<b>MISO Transmission Owner</b>	<b>Mitigation Required</b>
Low voltages at various OTP buses	OTP	Install one 15 MVar capacitor banks at Northwoods 115kV

**Expected Deliverables:**

MISO Transmission Owner shall provide MISO with all of the deliverables listed, along with a final report. The report shall be in the format specified by the document “Facility Study Report Template.docx” that includes the following content:

1. Executive Summary

This section shall include a summary of the Generator Interconnection (“GI”) request and a review of the Facilities to physically connect the Generator to the new Interconnection Substation. A summary table should be provided identifying the upgrade, the classification, and the cost.

2. Description of Upgrades

This section shall include the descriptions of the Interconnection Facilities with a high-level description of the equipment and facilities required for each type of upgrade classification, including:

- a) Transmission Owner’s Interconnection Facilities (“TOIF”);
- b) Network Upgrades; and
- c) Stand Alone Network Upgrades.

3. Project Cost Estimates

4. Project Schedule

5. Exhibits, as applicable:

- a) Exhibit A1: One-Line and System Map (MISO Transmission Owner develops) - Transmission Owner (“TO”) elementary one-line diagram(s) of Network Upgrades, Stand Alone Upgrades, System Protection Upgrades.
- b) Exhibit A2: General Arrangement Drawings (MISO Transmission Owner develops) - a site plan and/or general arrangement drawing showing the TO’s facilities complete with all transmission line structures impacted by the new substation or switching station.
- c) Exhibit A3: Facilities to be Constructed by TO (MISO Transmission Owner develops) - a categorized list or tabulation of Non-Stand Alone Network Upgrades, Stand Alone Network Upgrades, System Protection Upgrades to be constructed by the TO.
- d) Exhibit A4: Detailed Cost Estimate of Facilities to be Constructed by TO (MISO Transmission Owner develops) - a categorized detailed cost estimate of facilities identified in Exhibit A3 as by TO, by major component (e.g. transformer, line terminal, breaker, etc.) and by subcomponent (e.g. lightning arrester, disconnect switches, protection equipment, communication equipment, monitoring and alarm equipment, metering facilities, grounding, special controls or equipment needed to meet stability or short circuit criteria, etc.). Similarly, each transmission line should be subcategorized in a detailed cost estimate by Right-of-Way (“ROW”) acquisition needs (new/existing, and major/minor) and the major and minor

components.

- e) Exhibit A5: Facilities Subject to TO Reimbursement (MISO Transmission Owner develops) - Total categorized cost estimate for Network Upgrades (Stand Alone and Non-Stand Alone) including a list or tabulation of Interconnection Facilities or Network Upgrades (Stand Alone and Non-Stand Alone) that are subject to the transmission service credits described in MISO Attachment X.
- f) Exhibit A6: Construction and Coordination Schedule (MISO Transmission Owner develops) – a construction coordination schedule for Network Upgrades (subcategorized by Non-Stand Alone and Stand Alone Network Upgrades) identifying long lead items, outage issues and expected critical path coordination items. Identify activity start dates, duration of activity and expected completion dates for all major components. Identify Progress Payments Identify start-up and test responsibilities. Identify TO permitting process and issues including ROW acquisition for new transmission lines or substations.
- g) Exhibit A7: Permits, Licenses and Regulatory Approvals (MISO Transmission Owner develops) – a listing of permits, licenses, regulatory approvals and authorizations, expected by TO, needed for construction of TO facilities.
- h) Exhibit A8: Interconnection and Operating Guidelines (MISO Transmission Owner develops) – a listing of interconnection and operating guidelines required by Transmission Owner. These requirements/guidelines may include topics such

as system protection facilities, communication requirements, metering requirements, grounding requirements, transmission line and substation connection configurations, unit stability requirements, equipment ratings, short circuit requirements, synchronizing requirements, generation and operation control requirements, data provisions, energization inspection and testing requirements, if applicable, the unique requirements, if any, of the Transmission Owner to which the facility will be physically interconnected, switching and tagging, data reporting requirements, training, capacity determination and verification (including ancillary services and certification), emergency operations, including system restoration and black start arrangements, identified must-run conditions, provision of ancillary services, specific transmission requirements of nuclear units to abide by all Nuclear Regulatory Commission requirements and regulations, stability requirements, including generation short circuit ratio considerations, limitations of operations in support of emergency response, maintenance and testing, voltage schedule requirements and any other specific requirement not listed above.

**Total Dollar Value:**

The estimated cost for the Work performed pursuant to this First SOW, including any and all expenses, is \$ 15,000.00.



**Attachment B**

**Form of Statement of Work for Further Study:**

**Facilities Study for Network Upgrades to Affected System**

This Statement of Work (“SOW”) is made by the Midcontinent Independent System Operator, Inc. (“MISO”), MISO TO (“Abbreviation, if applicable” or “MISO Transmission Owner”) and **AFFECTED SYSTEM OPERATOR NAME** (“Abbreviation, if applicable” or “Company”) pursuant to that [DATE] Facilities Study for Network Upgrades to Affected System for [Cycle] (“Agreement”). Through this SOW, additional study is needed (“Further Study”). MISO, MISO Transmission Owner and Company agree that the Further Study shall be conducted and compensated according to the following terms:

**1. Name:** [Cycle]

**2. Type of Study:** \_\_\_\_\_

**3. Projects:** List of Projects in Section 7

**4. Study Commencement Date:**[DATE]

**5. Study Completion Deadline:** [DATE]

**6. Deposit for Study \$\_\_\_\_\_.** Consistent with Section 6.0 and 7.0 of the Agreement, this amount must be paid before this request is considered to have been received and is therefore eligible for acceptance under the terms of the Agreement Section 6.0 and 7.0.

## 7. Scope and Deliverables

**Objective and Scope** and **Study Deliverables** will be the same as initial Study, as outlined in Attachment A.

Revised Project List:

[Project List]

## 8. Additional Terms and Requirements

No additional information, terms, or requirements beyond this Attachment B and MISO Tariff

**9. Conflicts, Scope & Incorporation of Terms:** The terms of the Agreement shall be applicable to this SOW. Terms contained in correspondence between the Parties that are not incorporated into this SOW shall not be deemed binding or of any effect. The terms of this SOW shall govern only the Study identified herein.

<b>Company:</b>
<b>By (Printed Name and Title):</b>
<b>Signature:</b>
<b>Date:</b>

<b>MISO Transmission Owner:</b>
<b>By (Printed Name and Title):</b>
<b>Signature:</b>
<b>Date:</b>

**MISO's Acknowledgment.**

MISO hereby agrees to the terms of this SOW.

<b>By (Printed Name and Title):</b>
<b>Signature:</b>
<b>Date:</b>