

**AEP Portion of
Facilities Study Report
For
Physical Interconnection of
PJM Generation Interconnection Request
Project ID AG2-072
"Rockport 765 kV"**

Introduction

This Facilities Study has been prepared in accordance with the PJM Open Access Transmission Tariff Part VII, and, if applicable, the Application and Studies Agreement between the Project Developer and PJM Interconnection, LLC (PJM or Transmission Provider (TP)). The Transmission Owner (TO) is AEP Indiana Michigan Transmission Company to be abbreviated in the remainder of this report as IMTCO.

This Facility Study was performed to satisfy the Phase 2 Facility Study requirement of the PJM Tariff. The Facility Study is intended to provide scope, cost and schedule estimates for the project as currently defined and approved for Phase 2 study. In the event project changes are made during DP2 that impact this report, updates will be provided as part of the Phase 3 report. Following execution of the project's final agreement, this report will not be updated to account for other changes made as part of the agreement's modification clause and instead the scope change process will be followed.

A. Transmission Owner Facilities Study Summary

1. PROJECT DESCRIPTION

The Project Developer (PD) has proposed a Natural Gas Generating Facility located in Tazewell County, VA with the designated PJM Project ID AG2-072. The installed facilities for AG2-072 will have a total Maximum Facility Output (MFO) of 700.00 MW with 700MW of this output being recognized by PJM as Capacity.

2. POINT OF INTERCONNECTION (POI)

The Generating Facility will interconnect with the American Electric Power (AEP) transmission system via a direct connection to the ROCKPORT 765 kV Station.

The proposed generation interconnection is shown on the single line diagram in Attachment #1.

3. POINT OF CHANGE IN OWNERSHIP

The Point of Change in Ownership (PCO) will be located at the first dead-end structure in the generation lead circuit outside of the ROCKPORT 765 kV Station fence. IMTCO will own the span from the ROCKPORT 765 kV Station to the IMTCO constructed and owned dead-end PCO structure, including the jumpers. The Project Developer will own the other span connecting to the PCO structure, along with the remainder of the 765 kV generation lead circuit transmission line and associated structures back to the AG2-072 generation collector station.

4. SCOPE OF PROJECT DEVELOPER INTERCONNECTION FACILITIES

The Project Developer will design, build, own, operate, and maintain the Project Developer Interconnection Facilities on the Project Developer's side of the Point of Change in Ownership (PCO). This includes, but is not limited to:

- Circuit breakers and associated equipment located between the high side of the MPT(s) or GSU(s) and the Point of Change in Ownership
- Generator lead line from the Generating Facility to the Point of Change in Ownership
- Relay and protective equipment, telecommunications equipment, and Supervisory Control and Data Acquisition (SCADA) to comply with the TO's Applicable Technical Requirements and Standards

B. Transmission Owner Facilities Study Results

The following is a description of the planned Transmission Owner facilities for the physical interconnection of the proposed AG2-072 project to IMTCO transmission system. These facilities shall be designed according to IMTCO Applicable Technical Requirements and Standards. Once built, IMTCO will own, operate, and maintain these Facilities.

1. TRANSMISSION OWNER INTERCONNECTION FACILITIES

A 765 kV dead-end structure and foundation outside the fence of the Interconnection Substation, to terminate the Project Developer's generator lead line.

Line conductor from the dead-end structure to the bus position in the switchyard of the interconnection substation.

The IMTCO Interconnection Facilities will include but are not limited to the following:

- Installation of one (1) new steel, 140-foot, single-circuit, three-pole dead-end structure on a concrete pier foundation with anchor bolt cage, located outside the interconnection substation fence, to terminate the Project Developer's generator lead line.

2. STAND ALONE NETWORK UPGRADES

- Installation of a dual, direct fiber-based, current differential line protection relay scheme for the line to the AG2-072 765 kV Station.
- Installation of new fiber optic cable paths consisting of 0.2 miles of underground 144 count All Dielectric Loose Tube (ADLT) cable and associated terminations extending to the Rockport 765 kV Station.

3. NETWORK UPGRADES

IMTCO will tie the proposed AG2-072 765 kV project into the existing ROCKPORT 765 kV station by completing the following construction tasks:

- Relocation of Circuit Breakers C2 and C-C, and Disconnect Switches C2S2, C2S1, and CS2, to the D String.
- Installation of two (2) new 765 kV circuit breakers and three (3) 765 kV disconnect switches on the D String.
- Extension of associated buswork to accommodate the new D String configuration.

3.1 Jefferson

- Removal of 0.5 miles of 7#8 Alumoweld shield wire.
- Removal of 0.5 miles of 4-bundled 1351.5 MCM 45/7 "Dipper" ACSR conductor.
- Replacement of 0.5 miles of 4-bundled 1351.5 MCM 45/7 "Tern" ACSR conductor on new structures.
- Removal of Structures 1 and 2 on the Rockport – Jefferson 765 kV line.
- Relocation of reactors to be utilized on the new Jefferson line exit.
- Installation of coupling capacitor voltage transformers (CCVTs) on the Jefferson line.

- Relocation of Jefferson line wave traps to the adjacent breaker string.
- Updates to Jefferson line protection and control settings to reflect rewiring to new circuit breakers.
- Installation of associated structures, foundations, and hardware.

3.2 Sullivan

- Removal of 0.5 miles of 7#8 Alumoweld shield wire.
- Removal of 0.5 miles of 4-bundled 1351.5 MCM 45/7 “Dipper” ACSR conductor.
- Removal of Structure 1 on the Rockport – Sullivan 765 kV line.
- Reconfiguration of connections to existing line shunt reactors for use on the Sullivan line exit.
- Relocation of Sullivan line wave traps to the adjacent breaker string.
- Updates to Sullivan line protection and control settings to reflect rewiring to new circuit breakers.
- Installation of associated structures, foundations, and hardware.

3.3 Rockport Works – AK Steel 138 kV

- Removal of 0.8 miles of 7#8 Alumoweld shield wire.
- Removal of 0.8 miles of 4-bundled 1351.5 MCM 45/7 “Dipper” ACSR conductor.
- Removal of Structures 1 through 3 and the associated span to Structure 4 on the Rockport Works – AK Steel line.
- Removal of existing optical ground wire (OPGW) fiber facilities.

4. OTHER SCOPE OF WORK

- Installation of a 765 kV revenue metering package, three (3) single phase coupling capacitor voltage transformers (CCVT), associated structures and foundations, one (1) ethernet switch, and one (1) DICM-installed metering panel, for the generation lead circuit at the proposed AG2-072 765 kV Station.
- Installation of two (2) auxiliary meters, procured by AEP and installed by the Project Developer along with the associated Fiber.

5. MILESTONE SCHEDULES FOR COMPLETION OF AEP WORK

5.1. STANDARD OPTION

Facilities outlined in this report are estimated to take approximately 42 months to be functionally complete. This timeline begins at the PJM construction project kickoff meeting, after execution of the Generation Interconnection Agreement. This schedule is impacted by the timeline for procurement and installation of long lead items, the ability to obtain outages to construct and test the proposed facilities.

<u>Activity</u>	<u>Start Month</u>	<u>Finish Month</u>
Agreement Period*	1	2
Engineering	3	15
Procurement	4	40
Construction	27	42

***Day 1 will be determined at the PJM construction project kick off meeting.**

Note - Scheduled Outages are contingent upon outage availability. Longer duration outages are not available during peak load periods.

The above schedule is based on typical AEP construction timelines, long lead material availability, and common outage constraints which are subject to change during the tariff defined Final Agreement Negotiation Phase.

6. ASSUMPTIONS IN DEVELOPING SCOPE/COST/SCHEDULE

Note - Any materials purchased, or design decisions made by the Project Developer (relative to any facilities to be owned by AEP) prior to coordination with and approval by the executing AEP team (pursuant to an Engineering and Procurement or Generation Interconnection Agreement) are at the developer's risk and may not meet the specifications required for interconnection with the AEP transmission system.

6.1. SCOPE ASSUMPTIONS

- Equipment specifications (Breaker ratings, conductor size, etc.) are a result of the desktop functional scoping process observed while conducting this facilities study. These specifications are subject to change based on the results of the detailed scoping efforts that will take place post-interconnection or engineering and procurement agreements.
- Protection and Control (P&C) coordination with the Project Developer will be needed throughout the project. The Project Developer will be required to install an AEP-compatible line relaying protection panel at the collector substation using AEP standards to ensure relay coordination and adequate line protection. The AEP design team will ensure that the firmware at the collector station terminal matches the approved firmware at the AEP terminal. Failure to accept the cost of a matching line relay protection panel may change scoping.

- Scopes provided are based on a table-top process without the benefit of the results of site-specific engineering studies (e.g., soil borings, environmental survey, ground grid, etc.), unless otherwise provided by the Project Developer.
- The Project Developer will obtain, at its cost, all necessary provisions for the AEP direct connection facilities.
- The Project Developer will have their construction and required checkout completed prior to the start of the interconnection to the proposed AG2-072 765 kV station and any required testing outages.

6.2. SCHEDULE ASSUMPTIONS

All transmission outages are subject to PJM and AEP Operations outage scheduling requirements.

Significant scope of work changes will impact the schedule.

The above schedule reflects only the work required to interconnect the AG2-072 project. The schedules regarding network upgrades associated with this project, if any, are detailed in the documentation related to the specific network upgrade.

Slippage by the Project Developer in executing the Generation Interconnection Agreement (GIA) does not equate to a "day for day" slippage in the scheduled back feed and in service dates. Depending on the time of year, planned outages, neighboring projects and maintenance of the grid, outage availability has the potential to shift by weeks or months depending on conditions at the time of the fully executed agreement.

6.3. ESTIMATE ASSUMPTIONS

Estimates provided are based on a table-top process without the benefit of the results of site-specific engineering studies (e.g., soil borings, environmental survey, ground grid, etc.), unless otherwise provided by the Project Developer.

7. REVENUE METERING REQUIREMENTS

All revenue metering needed for this interconnection project must meet the metering requirements stated in Appendix 2, section 8 of the AG2-072 GIA, and in PJM Manuals M01 and M14D. The details of applicable revenue metering requirements are provided in the "Connection Requirements for the AEP Transmission System" document, found at:

<https://www.aep.com/requiredpostings/AEPTransmissionStudies>

The primary and backup metering will be installed on the Transmission Owner side of the Point of Change in Ownership and will be owned and maintained by the Transmission Owner.

Any additional generation proposed behind an originating project's PCO that differs in either fuel type or corporate entity from the originating project will require the installation of additional submetering for both the originating project and the uprate for the purpose of settlement. Submetering will require additional space within the originating project's facilities. The meters, routers, Ethernet to fiber converters, and telecom switch will be procured and owned by AEP. The revenue quality instrument transformers, fiber-optic cable connecting the submeters, and any other additional hardware for the required submetering will be procured, installed, owned, and maintained by the Project Developer.

8. LAND REQUIREMENTS FOR INTERCONNECTION SUBSTATION

Land requirements for the Interconnection Substation needed for this interconnection project must meet the requirements in the <https://www.aep.com/requiredpostings/AEPTransmissionStudies> posted on AEP website.

The station footprint will be expanded by approximately 80 feet to the east and approximately 160 feet to the south.

9. APPLICABLE TECHNICAL REQUIREMENTS AND STANDARDS

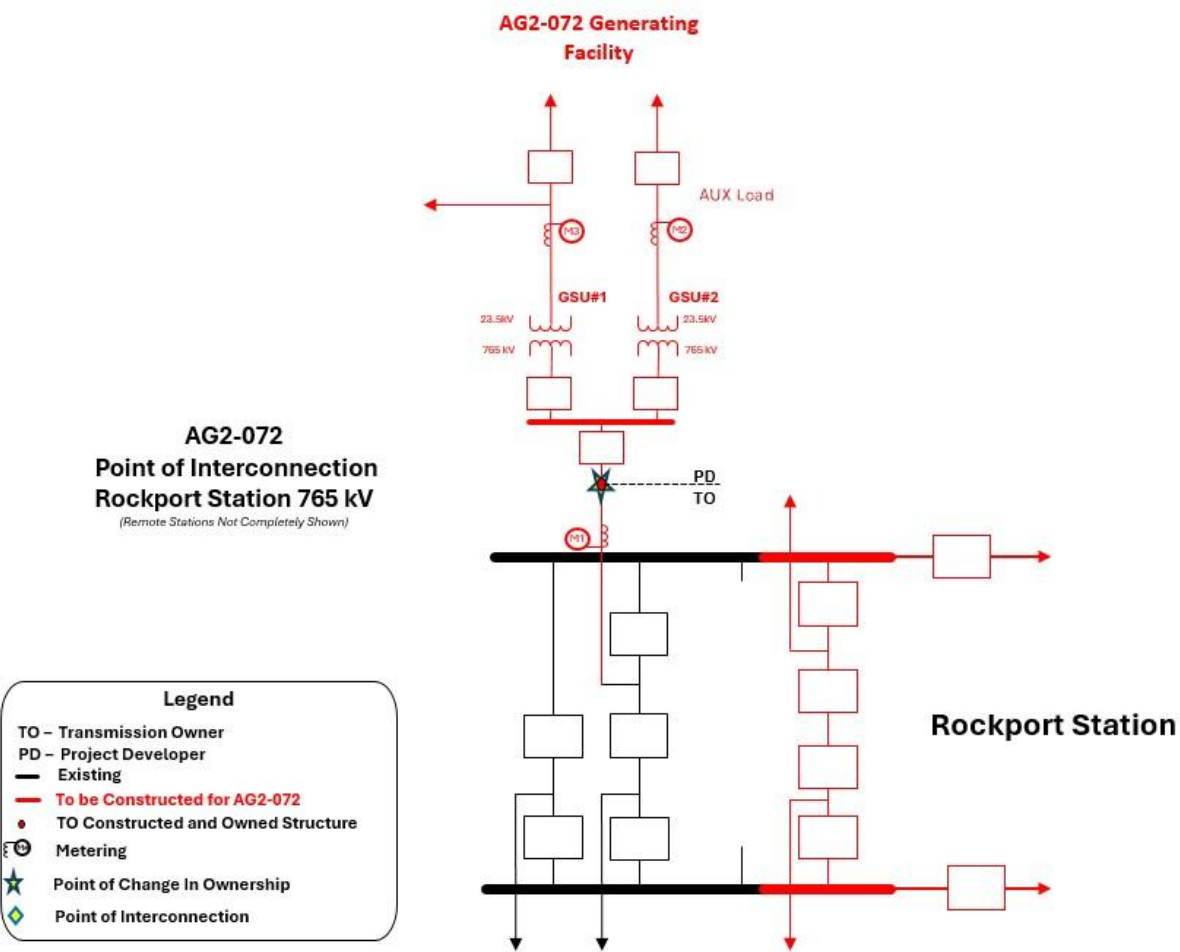
Applicable Technical Requirements and Standard: The [Connection Requirements for the AEP Transmission System](#) Rev 7 dated 12/31/2025 shall apply.

10. ENVIRONMENTAL AND PERMITTING

The Project Developer is expected to obtain, at its cost, all necessary permits and provisions for the facilities to be constructed for this interconnection. AEP requires that the standards provided in the "Standards and Expectations for Siting, Real Estate, Right-Of-Way, and Environmental Permitting for Transmission Interconnection Projects", found at: <https://www.aep.com/requiredpostings/AEPTransmissionStudies> be adhered to for all facilities interconnecting with the AEP transmission system.

C APPENDICES

Attachment #1: Single Line Diagram for the Physical Interconnection



Attachment #2: Substation General Arrangement

