

Allegheny Power – Transmission System Design Requirements

1.0 Limitation on Use and General Information

These Transmission System Design Requirements Applicable to Exercise of Option to Build by Interconnection Customers (Design Requirements) are posted to the website of PJM Interconnection, L.L.C. (PJM) solely for the use by Interconnection Customers that elect the Option to Build under the PJM Tariff with regard to Transmission Owner Interconnection Facilities and/or Merchant Network Upgrades on the portion of the PJM Transmission System owned by Allegheny Power (AP)¹ and may not be used by any person or entity for any other purpose. AP reserves the right to seek equitable relief and monetary damages against any person or entity that uses these Design Requirements for any other purpose or in a manner that is inconsistent with this Statement of Purpose and Limitation on Use.

These Design Requirements provide Interconnection Customers with the necessary information to perform preliminary design layouts for Transmission Owner Interconnection Facilities and/or Merchant Network Upgrades to be integrated into the AP portion of the Transmission System and AP requires strict compliance. AP will not permit deviation or waiver from any portion of these Design Requirements unless prior authorization in writing has been obtained from AP.

Adherence to these Design Requirements will ensure compatibility of designs and equipment, and will contribute to the uniformity of service to all parties connected to the AP electrical system. These requirements are consistent with the requirements for Facility Connections as specified by NERC Planning Standards; ECAR reliability principals, guides, standards, and reference documents; the PJM Tariff; and PJM TSS Technical Requirements. In addition, these requirements are consistent with Good Utility Practice and in compliance with NEC, NESC, ANSI, NEMA and IEEE standards. If a conflict arises between these Design Requirements and industry standards, these Design Requirements shall control.

These Design Requirements must be used to prepare preliminary plans for installation. However, Interconnection Customers are advised that the information contained herein does not include all of the details necessary to prepare a complete engineering design package. The information contained herein constitutes the minimum acceptable design requirements. Additional requirements may be necessary as a result of the findings of AP studies performed in conjunction with the proposed project.²

¹ Allegheny Power is the trade name for Monongahela Power Company, The Potomac Edison Company, and West Penn Power Company.

² Due to the evolution of AP's portion of the Transmission System, some of the older AP substation installations are of a different design configuration than those currently specified in these Design Requirements. These substation designs were compliant with the connection criteria in effect when they were constructed and are therefore grandfathered for purposes of compliance with this document.

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1.0 Limitation on Use and General Information (Continued)

AP requires the Interconnection Customer to schedule a face-to-face meeting with AP to discuss the overall project and to discuss how these Design Requirements apply to the proposed project. Additional topics to be discussed will include control protective relaying and control schemes, SCADA requirements, metering details/interfaces/protocol, and communications interfaces. The meeting should occur promptly after execution of the Interconnection Service Agreement and before the detailed engineering for the project begins. Within 10 days after the meeting, AP will provide to the Interconnection Customer with a complete engineering design package from a similar installation (all drawings and other pertinent information), to aid the Interconnection Customer in the design process. If requested, AP will provide equipment manufacturer information and specific purchase order numbers of equipment for similar projects.

The intent of this information exchange is four-fold:

1. To assure standardization and compatibility of designs and equipment that will be owned and operated by AP,
2. To determine specific details very early in the project, before equipment is ordered,
3. To provide the Interconnection Customer with manufacturer information for similar equipment in an effort to reduce the engineering effort and overall procurement time, and
4. To minimize any misinterpretations or wasted efforts that could lead to problems or delays later in the project.

Questions concerning these Design Requirements may be directed to:

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Requirements. These substation designs were compliant with the connection criteria in effect when they were constructed and are therefore grandfathered for purposes of compliance with this document.