



Summary of Procedures and Requirements
to Connect Generator Customers
to the Ameren Transmission System

The following NERC Reliability Standards apply to this Document

Standard Number & Revision	Registered Entity	NERC Functional Model
FAC-001-0	Ameren Services	Transmission Owner

Document Approvals

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A Generator Customer for the purposes of this procedure is defined as any customer, including Ameren and Ameren affiliates, desiring to connect to Ameren's Transmission System ("Transmission System") for the purpose of connecting generating equipment.

Requests for connecting generating equipment to the Ameren transmission system are handled by the Midwest Independent System Operator (Midwest ISO) via Attachment X to the Midwest ISO Tariff, dated January 6, 2009. As of this writing, the Midwest ISO Tariff – Attachment X document may be found at the Midwest ISO website at:

http://www.midwestmarket.org/publish/Document/25f0a7_11c1022c619_-7d600a48324a

In addition, Appendix 6 to the GIP (Generator Interconnection Procedure), also dated January 6, 2009, contains considerable information regarding generator interconnection agreements, and as of this writing can be found at:

http://www.midwestmarket.org/publish/Document/25f0a7_11c1022c619_-7d620a48324a

Previously, the Midwest ISO had two documents which dealt with generator connections, depending on the capacity of the generating equipment to be connected to the system. Midwest ISO Attachment X: Large Generator Interconnection Procedures, dated September 15, 2005 for generator connections greater than 20 MW, and Attachment R: Generator Interconnection Procedures and Agreement, dated December 23, 2002, for generator connections of 20 MW or less, were the documents which governed generator connections.

This reference to the Midwest ISO procedures for handling generation interconnections is included as part of two other Ameren documents: End User Connection Requirements to Ameren's Transmission System, and Transmission Facility Interconnection Procedures and Requirements. Both of these documents have been posted on Ameren's area on the Midwest ISO OASIS page at: <http://oasis.midwestiso.org/OASIS/AMRN>, and provide detailed requirements for both end-user load connections and transmission interconnections to Ameren's transmission system. This document was established only to summarize the processes used for last several years regarding the manner in which requests to connect generating equipment to the Ameren system are to be handled and to provide a cross reference table of FAC-001-0 requirements and MISO Attachment X. (see table on Pages 4-5)

NERC Standard to Midwest ISO Attachment X and Appendices Cross Reference

NERC Standard: FAC-001-0

NERC Requirement or Measure	MISO Attachment X Document and Section
R1.1 Generation facilities	Document as a whole
R2.1.1 Procedures for coordinated joint studies	Attachment X Section 3.5 (Sheet No. 3071), Section 4.2 (Sheet No. 3074)
R2.1.2 Procedures for notification of new or modified facilities	Attachment X Section 3.5 (Sheet No. 3071), Appendix E to GIA (Sheet No. 3233)
R2.1.3 Voltage level and MW, Mvar demand	Attachment X, Appendix 1, Attachment A (Sheet No. 3114); Appendix 6, Appendix A to GIP (Sheet No. 3225)
R2.1.4 Breaker duty and surge protection	Attachment X, Section 3.2.1.2 (Sheet No. 3066); Section 14.2.1.5 (Sheet 3105); Appendix C to GIA (Sheet No. 3231)
R2.1.5 System Protection and coordination	Attachment X, Section 3.2.2.1 (Sheet No. 3067); Section 3.5 (Sheet No. 3071A); Section 7.3 (Sheet No. 3082); Appendix 6 to GIP, Section 9.7.4 (starting Sheet No. 3194); Appendix C to GIA (Sheet No. 3231)
R2.1.6 Metering and telecommunications	Appendix 6 to GIP, Article 7 (starting Sheet No. 3187); Appendix C to GIA (Sheet No. 3231)
R2.1.7 Grounding and safety issues	Attachment X, Section 7.3 (Sheet No. 3082) Section 14.3 (Sheet No. 3107); Appendix C to GIA (Sheet No. 3231)
R2.1.8 Insulation and insulation coordination	Appendix C to GIA (Sheet No. 3231)
R2.1.9 Voltage, Reactive Power, and power factor control	Appendix 6 to GIP, Section 9.6 (Sheet No. 3190)
R2.1.10 Power quality impacts	Attachment X, Section 14.2.3 (Sheet No. 3107); Section 14.4.1.2 (Sheet No. 3108); Attachment X, Appendix 1, Attachment A (Sheet No. 3116); Appendix 6 to GIP, Section 9.7.6 (Sheet No. 3195)
R2.1.11 Equipment Ratings	Attachment X, Appendix 1, Attachment A (Sheet No. 3114); Appendix C to GIA (Sheet No.3231)
R2.1.12 Synchronizing of facilities	Attachment X, Appendix 1 (Sheet No. 3112); Appendix C to GIA (Sheet No. 3231)
R2.1.13 Maintenance coordination	Attachment X, Item 3.0 (Sheet No 3144);

	Appendix 6 to GIP, Article 10 (starting Sheet No. 3196)
R2.1.14 Operational issues (abnormal frequency and voltages)	Appendix 6 to GIP, Section 9.7.3 (Sheet No. 3193)
R2.1.15 Inspection requirement for existing or new facilities	Appendix 6 to GIP, Section 5.12 (Sheet No. 3176); Appendix C to GIA (Sheet No. 3231)
R2.1.16 Communications and procedures during normal and emergency operating conditions	Appendix 6 to GIP, Article 8 (starting Sheet No. 3188); Appendix 6 to GIP, Section 9.7 (Sheet No. 3191); Appendix C to GIA (Sheet No. 3231)