

**LOUISVILLE GAS AND ELECTRIC COMPANY/
KENTUCKY UTILITIES COMPANY
MANDATORY RELIABILITY STANDARDS
WRITTEN PROCEDURE FOR COMPLIANCE**

Standard: FAC-001-0 – Facility Connection Requirements

Groups responsible: Transmission Owner

Effective Date of Standard: April 1, 2005

Effective Date of Procedure: June 3, 2007

Standard (the text of standard as approved):

R1 The Transmission Owner shall document, maintain, and publish facility connection requirements to ensure compliance with NERC Reliability Standards and applicable Regional Reliability Organization, sub regional, Power Pool, and individual Transmission Owner planning criteria and facility connection requirements. The Transmission Owner's facility connection requirements shall address connection requirements for:

R1.1 Generation facilities,

R1.2 Transmission facilities, and

R1.3 End-user facilities

R2 The Transmission Owner's facility connection requirements shall address, but are not limited to, the following items:

R2.1 Provide a written summary of its plans to achieve the required system performance as described above throughout the planning horizon:

R2.1.1 Procedures for coordinated joint studies of new facilities and their impacts on the interconnected transmission systems.

R2.1.2 Procedures for notification of new or modified facilities to others (those responsible for the reliability of the interconnected transmission systems) as soon as feasible.

R2.1.3 Voltage level and MW and MVAR capacity or demand at point of connection.

R2.1.4 Breaker duty and surge protection.

R2.1.5 System protection and coordination.

- R2.1.6 Metering and telecommunications.
- R2.1.7 Grounding and safety issues.
- R2.1.8 Insulation and insulation coordination.
- R2.1.9 Voltage, Reactive Power, and power factor control.
- R2.1.10 Power quality impacts.
- R2.1.11 Equipment Ratings.
- R2.1.12 Synchronizing of facilities.
- R2.1.13 Maintenance coordination.
- R2.1.14 Operational issues (abnormal frequency and voltages).
- R2.1.15 Inspection requirements for existing or new facilities.
- R2.1.16 Communications and procedures during normal and emergency operating conditions.

R3 The Transmission Owner shall maintain and update its facility connection requirements as required. The Transmission Owner shall make documentation of these requirements available to the users of the transmission system, the Regional Reliability Organization, and NERC on request (five business days).

Measures (the text of measures as approved):

- M1 The Transmission Owner shall make available (to its Compliance Monitor) for inspection evidence that it met all the requirements stated in Reliability Standard FAC-001-0_R1.
- M2 The Transmission Owner shall make available (to its Compliance Monitor) for inspection evidence that it met all requirements stated in Reliability Standard FAC-001-0_R2.
- M3 The Transmission Owner shall make available (to its Compliance Monitor) for inspection evidence that it met all the requirements stated in Reliability Standard FAC-001-0_R3.

E.ON U.S. FAC-001-0 – Facility Connection Requirements

Introduction

E.ON U.S. (Regulated utilities: Kentucky Utilities and Louisville Gas and Electric) has prepared this document to identify the technical requirements for connecting new facilities to the E.ON U.S. transmission system. This document is written to comply with North American Electric Reliability Council (NERC) reliability standards, specifically the FAC-001-0 Facility Connection Requirements standard. This document addresses the standard's requirements for interconnecting generation, transmission, and end-user facilities.

This document serves as a general outline for generation, transmission and end user facilities that connect to the E.ON U.S. transmission system. The requirements and guidelines in this document are consistent with those used by E.ON U.S. when installing new facilities or modifying existing facilities. All connections to E.ON U.S. facilities at 69kV and above should be based on good utility practice and must be in compliance with all applicable standards of E.ON U.S., NERC, and the Southeastern Electric Reliability Council (SERC).

This document and all attachments and references are subject to change to reflect changes or clarifications in planning, operating, or interconnection policies. E.ON U.S. shall reserve the right to take such actions as deemed necessary to ensure the reliability of the interconnected transmission system.

Supporting Documents

The following supporting documents referenced herein are available at <http://sppoasis.spp.org/OASIS/LGEE>:

- E.ON U.S. LLC Pro forma Open Access Transmission Tariff
- E.ON U.S. Transmission System Planning Guidelines

I. Generation Facilities

R2. The Transmission Owner's facility connection requirements shall address, but are not limited to, the following items:

R2.1. Provide a written summary of its plans to achieve the required system performance as described above throughout the planning horizon:

R2.1.1. Procedures for coordinated joint studies of new facilities and their impacts on the interconnected transmission systems.

The transmission expansion process for E.ON U.S. is currently the responsibility of the Southwest Power Pool (SPP) Independent Transmission Operator (ITO). The SPP performs impact studies, including those for generator interconnections and major load connections. The expansion plan is designed based on NERC planning requirements and the E.ON U.S. Transmission System Planning Guidelines.

R2.1.2. Procedures for notification of new or modified facilities to others (those responsible for the reliability of the interconnected transmission systems) as soon as feasible.

Procedures for notification shall be consistent with the E.ON U.S. LLC Pro forma Open Access Transmission Tariff, dated July 13, 2007.

R2.1.3. Voltage level and MW and MVAR capacity or demand at point of connection.

Specific guidelines as to voltage level and MW and MVAR capacity or demand at point of connection are addressed in the E.ON U.S. LLC Pro forma Open Access Transmission Tariff, dated July 13, 2007.

R2.1.4. Breaker duty and surge protection.

All facilities must equal or exceed the fault duty capability necessary to meet system short circuit requirements as determined through short circuit analyses.

Each facility owner is responsible for the short circuit capabilities of their own current carrying elements and the ratings of their own interrupting devices. It is the responsibility of the attaching party to coordinate their relays and devices with the E.ON U.S. transmission system. Generation and transmission customers are responsible for notifying E.ON U.S. of any changes in their facilities that may cause an increase in fault currents.

R2.1.5. System protection and coordination.

System protection and coordination is addressed in Article 5.10, 9.7.4, and 24 of the E.ON U.S. LLC Pro forma Open Access Transmission Tariff, dated July 13, 2007. Parties shall communicate in advance of any changes in their respective

facilities, which reasonably can be expected to affect protective device coordination for either party.

R2.1.6. Metering and telecommunications.

Article 7 and Article 8 of the E.ON U.S. LLC Pro forma Open Access Transmission Tariff, dated July 13, 2007, address metering requirements and telecommunications requirements, respectively.

R2.1.7. Grounding and safety issues.

Grounding and safety considerations should be consistent with Good Utility Practice and NESC guidelines. In addition, any safety or grounding standards identified by the ITO or E.ON U.S. shall be followed. Facility owners must provide to E.ON U.S. any design details related to the system grounding issues identified in part III.9 of the SERC Supplement for Facility Connection Requirements, dated October 13, 2005.

R2.1.8. Insulation and insulation coordination.

Insulation coordination is required for system reliability and safety. The owner of proposed interconnected equipment which may impact the performance and reliability of the E.ON U.S. system document and submit applicable information as part of the interconnection proposal, including, but not limited to: conductor spacing, surge arrester application and other substation insulation design shall be documented and submitted in the interconnection proposal.

R2.1.9. Voltage, Reactive Power, and power factor control.

Power factor control shall be within the same range as E.ON U.S., pursuant to Good Utility Practices. Additional requirements for voltage, reactive power, and power factor control are contained in Appendix 6 Article 9.6 and Schedule 2 article 1.8 of the E.ON U.S. LLC Pro forma Open Access Transmission Tariff, dated July 13, 2007.

R2.1.10. Power quality impacts.

Power quality impacts are addressed in Article 9.7.6 of the E.ON U.S. LLC Pro forma Open Access Transmission Tariff, dated July 13, 2007.

R2.1.11. Equipment Ratings.

Equipment ratings shall be coordinated with E.ON U.S. to ensure reliability and compatibility with E.ON U.S. equipment ratings.

R2.1.12. Synchronizing of facilities.

Facilities shall be synchronized with the transmission system consistent with article 9.5 of the E.ON U.S. LLC Pro forma Open Access Transmission Tariff, dated July 13, 2007.

R2.1.13. Maintenance coordination.

Maintenance practices of connected generation, transmission, and end-user facilities shall be performed at a level that ensures the reliability and continuity of service of the interconnected transmission system. Relevant maintenance records should be maintained. Equipment requiring maintenance and/or testing or calibration is listed in part III.15 of the SERC Supplement for Facility Connection Requirements, dated October 13, 2005.

Maintenance coordination and notification shall be consistent with Article 15.4 of the E.ON U.S. LLC Pro forma Open Access Transmission Tariff, dated July 13, 2007.

R2.1.14. Operational issues (abnormal frequency and voltages).

Abnormal voltage and frequency issues are addressed in articles 9.6.2.1 and 9.7.3 of the E.ON U.S. LLC Pro forma Open Access Transmission Tariff, dated July 13, 2007.

R2.1.15. Inspection requirements for existing or new facilities.

Inspection and testing requirements are addressed in Article 6 of the E.ON U.S. LLC Pro forma Open Access Transmission Tariff, dated July 13, 2007.

R2.1.16. Communications and procedures during normal and emergency operating conditions.

Communications and procedures shall be consistent with:

- Article 8 of the E.ON U.S. LLC Pro forma Open Access Transmission Tariff, dated July 13, 2007.
- Provisions of part III.19 and III.20 of the SERC Supplement for Facility Connection Requirements, dated October 13, 2005.

R3. The Transmission Owner shall maintain and update its facility connection requirements as required. The Transmission Owner shall make documentation of these requirements available to the users of the transmission system, the Regional Reliability Organization, and NERC on request (five business days).

E.ON U.S. will make facility connection requirements available to users of the transmission system, SERC, and NERC upon request.

II. Transmission Facilities

R2. The Transmission Owner's facility connection requirements shall address, but are not limited to, the following items:

R2.1. Provide a written summary of its plans to achieve the required system performance as described above throughout the planning horizon:

R2.1.1. Procedures for coordinated joint studies of new facilities and their impacts on the interconnected transmission systems.

For new transmission interconnections, the interconnecting party should contact the ITO. The ITO will then direct the request to E.ON U.S., which will enable the interconnecting transmission owner to begin discussions and joint studies with E.ON U.S. Studies will be based on NERC planning requirements and the E.ON U.S. Transmission System Planning Guidelines. The results of this process will form the basis for an interconnection agreement between E.ON U.S. and the interconnecting transmission owner. The final agreement will be reviewed and approved by the ITO.

R2.1.2. Procedures for notification of new or modified facilities to others (those responsible for the reliability of the interconnected transmission systems) as soon as feasible.

For new facilities, the interconnecting transmission owner should contact the ITO to begin the joint modeling process with E.ON U.S. In the event of modified facilities, the interconnecting party should notify the E.ON U.S. System Control Center as well as the applicable Reliability Coordinator to ensure the continued reliability of the interconnected systems.

R2.1.3. Voltage level and MW and MVAR capacity or demand at point of connection.

Specific guidelines as to voltage level and MW and MVAR capacity or demand at point of connection are addressed in the E.ON U.S. LLC Pro forma Open Access Transmission Tariff, dated July 13, 2007.

R2.1.4. Breaker duty and surge protection.

All facilities must equal or exceed the fault duty capability necessary to meet system short circuit requirements as determined through short circuit analyses.

Each facility owner is responsible for the short circuit capabilities of their own current carrying elements and the ratings of their own interrupting devices. It is the responsibility of the attaching party to coordinate their relays and devices with the E.ON U.S. transmission system. Generation and transmission customers are responsible for notifying E.ON U.S. of any changes in their facilities that may cause an increase in fault currents.

R2.1.5. System protection and coordination.

System protection and coordination is addressed in Article 5.10, 9.7.4, and 24 of the E.ON U.S. LLC Pro forma Open Access Transmission Tariff, dated July 13, 2007. Parties shall communicate in advance of any changes in their respective facilities, which reasonably can be expected to affect protective device coordination for either party.

R2.1.6. Metering and telecommunications.

Article 7 and Article 8 of the E.ON U.S. LLC Pro forma Open Access Transmission Tariff, dated July 13, 2007, address metering requirements and telecommunications requirements, respectively.

R2.1.7. Grounding and safety issues.

Grounding and safety considerations should be consistent with Good Utility Practice and NESC guidelines. In addition, any safety or grounding standards identified by the ITO or E.ON U.S. shall be followed. Facility owners must provide to E.ON U.S. any design details related to the system grounding issues identified in the part III.9 of the SERC Supplement for Facility Connection Requirements, dated October 13, 2005.

R2.1.8. Insulation and insulation coordination.

Insulation coordination is required for system reliability and safety. The owner of proposed interconnected equipment which may impact the performance and reliability of the E.ON U.S. system document and submit applicable information as part of the interconnection proposal, including, but not limited to: conductor spacing, surge arrester application and other substation insulation design shall be documented and submitted in the interconnection proposal.

R2.1.9. Voltage, Reactive Power, and power factor control.

Power factor control shall be within the same range as E.ON U.S., pursuant to Good Utility Practices. Additional requirements for voltage, reactive power, and power factor control are contained in Appendix 6 Article 9.6 and Schedule 2 article 1.8 of the E.ON U.S. LLC Pro forma Open Access Transmission Tariff, dated July 13, 2007.

R2.1.10. Power quality impacts.

Power quality impacts are addressed in Article 9.7.6 of the E.ON U.S. LLC Pro forma Open Access Transmission Tariff, dated July 13, 2007.

R2.1.11. Equipment Ratings.

Equipment ratings shall be coordinated with E.ON U.S. to ensure reliability and compatibility with E.ON U.S. equipment ratings.

R2.1.12. Synchronizing of facilities.

Facilities shall be synchronized with the transmission system consistent with article 9.5 of the E.ON U.S. LLC Pro forma Open Access Transmission Tariff, dated July 13, 2007.

R2.1.13. Maintenance coordination.

Maintenance practices of connected generation, transmission, and end-user facilities shall be performed at a level that ensures the reliability and continuity of service of the interconnected transmission system. Relevant maintenance records should be maintained. Equipment requiring maintenance and/or testing or calibration is listed in part III.15 of the SERC Supplement for Facility Connection Requirements, dated October 13, 2005.

Maintenance coordination and notification shall be consistent with Article 15.4 of the E.ON U.S. LLC Pro forma Open Access Transmission Tariff, dated July 13, 2007.

R2.1.14. Operational issues (abnormal frequency and voltages).

Abnormal voltage and frequency issues are addressed in articles 9.6.2.1 and 9.7.3 of the E.ON U.S. LLC Pro forma Open Access Transmission Tariff, dated July 13, 2007.

R2.1.15. Inspection requirements for existing or new facilities.

Inspection and testing requirements are addressed in Article 6 of the E.ON U.S. LLC Pro forma Open Access Transmission Tariff, dated July 13, 2007.

R2.1.16. Communications and procedures during normal and emergency operating conditions.

Communications and procedures shall be consistent with:

- Article 8 of the E.ON U.S. LLC Pro forma Open Access Transmission Tariff, dated July 13, 2007.
- Provisions of part III.19 and III.20 of the SERC Supplement for Facility Connection Requirements, dated October 13, 2005.

R3. The Transmission Owner shall maintain and update its facility connection requirements as required. The Transmission Owner shall make documentation of

these requirements available to the users of the transmission system, the Regional Reliability Organization, and NERC on request (five business days).

E.ON U.S. will make facility connection requirements available to users of the transmission system, SERC, and NERC upon request.

III. End-user Facilities

R2. The Transmission Owner's facility connection requirements shall address, but are not limited to, the following items:

R2.1. Provide a written summary of its plans to achieve the required system performance as described above throughout the planning horizon:

R2.1.1. Procedures for coordinated joint studies of new facilities and their impacts on the interconnected transmission systems.

The transmission expansion process for E.ON U.S. is currently the responsibility of the Southwest Power Pool (SPP) Independent Transmission Operator (ITO). The SPP performs impact studies, including those for generator interconnections and major load connections. The expansion plan is designed based on NERC planning requirements and the E.ON U.S. Transmission System Planning Guidelines.

Additional information for new end-user facilities is contained in the following Retail Tariffs:

- Louisville Gas and Electric: <http://www.eon-us.com/rsc/lge/lgereselectric.pdf>
- Kentucky Utilities: <http://www.eon-us.com/rsc/ku/kuelecrates.pdf>
- Old Dominion Power: <http://www.eon-us.com/rsc/ku/odpelecrates.pdf>

R2.1.2. Procedures for notification of new or modified facilities to others (those responsible for the reliability of the interconnected transmission systems) as soon as feasible.

Procedures for notification shall be consistent with the Retail Tariffs noted in R2.1.1 and the E.ON U.S. LLC Pro forma Open Access Transmission Tariff, dated July 13, 2007.

R2.1.3. Voltage level and MW and MVAR capacity or demand at point of connection.

Specific guidelines as to voltage level and MW and MVAR capacity or demand at point of connection are addressed in the E.ON U.S. LLC Pro forma Open Access Transmission Tariff, dated July 13, 2007.

R2.1.4. Breaker duty and surge protection.

All facilities must equal or exceed the fault duty capability necessary to meet system short circuit requirements as determined through short circuit analyses.

Each facility owner is responsible for the short circuit capabilities of their own current carrying elements and the ratings of their own interrupting devices. It is the responsibility of the attaching party to coordinate their relays and devices with the E.ON U.S. transmission system. Generation and transmission customers are responsible for notifying E.ON U.S. of any changes in their facilities that may cause an increase in fault currents.

R2.1.5. System protection and coordination.

System protection and coordination is addressed in Article 5.10, 9.7.4, and 24 of the E.ON U.S. LLC Pro forma Open Access Transmission Tariff, dated July 13, 2007. Parties shall communicate in advance of any changes in their respective facilities, which reasonably can be expected to affect protective device coordination for either party.

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Insulation coordination is required for system reliability and safety. The owner of proposed interconnected equipment which may impact the performance and reliability of the E.ON U.S. system document and submit applicable information as part of the interconnection proposal, including, but not limited to: conductor spacing, surge arrester application and other substation insulation design shall be documented and submitted in the interconnection proposal.

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R2.1.16. Communications and procedures during normal and emergency operating conditions.

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