

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed

1. SAR posted for comment (December 18, 2013-January 17, 2014)
2. SC authorized moving the SAR forward to standard development (March 31, 2013)
- 2.3.45-day Formal Comment Period with Parallel Initial Ballot (April 1-May 15, 2014)

Description of Current Draft

Anticipated Actions	Anticipated Date
45-day Formal Comment Period with Parallel Initial Ballot	April 2014
45-day Formal Comment Period with Parallel Additional Ballot	June 2014
Final Ballot	<u>July-June</u> 2014
BOT <u>A</u> adoption	August 2014

Effective Date

The first day of the first calendar quarter that is one year after the date that this standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is one year after the date this standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
1		Added requirements for Generator Owner and brought overall standard format up to date.	Revision under Project 2010-07
1	February 9, 2012	Adopted by the Board of Trustees	
1	September 19, 2013	A FERC order was issued on September 19, 2013, approving FAC-001-1. This standard becomes <u>became</u> enforceable on November 25, 2013 for Transmission Owners. For Generator Owners, the standard becomes enforceable on January 1, 2015.	
2		Revisions to implement the recommendations of the FAC Five-Year Review Team.	Revision under Project 2010-02

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

None.

When this standard has received ballot approval, the text boxes will be moved to the Application Guidelines Section of the Standard.

A. Introduction

1. **Title:** Facility Interconnection Requirements
2. **Number:** FAC-001-2
3. **Purpose:** To avoid adverse impacts on the reliability of the Bulk Electric System, ensure that Transmission Owners and applicable Generator Owners must document and make Facility interconnection requirements available so that Facilities-entities seeking to interconnection will have the necessary information ~~necessary for considering and pursuing that interconnection.~~

4. **Applicability:**

- 4.1. **Functional Entities:**

- 4.1.1 Transmission Owner

- 4.1.2 Applicable Generator Owner

- 4.1.2.1 Generator Owner with a fully executed Agreement to conduct a study ~~to~~ on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems.

Rationale for Changes: “Fully” was added for consistency with R2. “Interconnected Transmission systems” was changed to “Transmission system” here and in R2. “Interconnected Transmission systems” was only used for conformance with language in FAC-002-1 that is no longer used in the proposed FAC-002-2.

5. **Background:**

~~The objective of FAC-001 is to ensure that Transmission Owners and applicable Generator Owners document Facility interconnection requirements so that Facilities seeking interconnection will have the information necessary for considering and pursuing that interconnection. This objective supports reliability principle 3, which states that “information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably.”~~

B. Requirements and Measures

R1. Each Transmission Owner shall document Facility interconnection requirements, update them as needed, and make them available upon request. Each Transmission Owner’s Facility interconnection requirements shall address interconnection requirements for:
[Violation Risk Factor: Lower] [Time Horizon: Long-term Planning]

- 1.1. ~~t~~Generation Facilities;
- 1.2. ~~t~~Transmission Facilities; and
- 1.3. ~~e~~End-user Facilities.

M1. Each Transmission Owner shall have evidence (such as dated, documented Facility interconnection requirements) that it met all requirements in Requirement R1.

Rationale for Changes: The first words in the Parts of R1 were made lowercase to make clear that they are not references to the NERC Glossary of Terms.

Throughout the standard, the term “interconnection” is deliberately lowercase and does not refer to the term “Interconnection” as used in the NERC Glossary of Terms.

R2. Each applicable Generator Owner shall; ~~within 45 days of full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner’s existing Facility that is used to interconnect to the interconnected Transmission systems,~~ document Facility interconnection requirements and make them available upon request within 45 calendar days of full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner’s existing Facility that is used to interconnect to the Transmission system. *[Violation Risk Factor: Lower] [Time Horizon: Long-term Planning]*

Rationale for Changes: To ensure that the “what” of the requirement – the action required – is clear, the SDT moved the phrase that begins with “within 45 days...” to the end of the requirement. “Calendar” was added between “45” and “days,” as was the intention of the SDT (already reflected in the VSLs), and “interconnected Transmission systems” was changed to “Transmission system” for conformance with the Applicability section.

M2. Each applicable Generator Owner shall have evidence (such as dated, documented Facility interconnection requirements) that it met all requirements in Requirement R2.

R3. Each Transmission Owner ~~and each applicable Generator Owner~~ shall address the following items in its Facility interconnection requirements: *[Violation Risk Factor: Lower]* *[Time Horizon: Long-Term Planning]*

3.1. Procedures for coordinated studies of new or materially modified ~~Facilities existing interconnections~~ and their impacts on affected system(s).

3.2. Procedures for notifying ~~those responsible for the reliability of affected system(s)~~ of new or materially modified ~~Facilities existing interconnections~~. ~~to those responsible for the reliability of affected system(s)~~.

M3. Each Transmission Owner ~~and each applicable Generator Owner~~ shall have evidence (such as dated, documented Facility interconnection requirements addressing the procedures) that it met all requirements in Requirement R3.

Rationale for Changes: Similar to the change in R2, the SDT rearranged the words in Part 3.2 for clarity, without changing the meaning of the requirement. Requirements for applicable Generator Owners have been moved to a separate requirement, R4.

While the SDT believes that in the Parts, materially modified “Facilities,” “interconnections,” or “interconnected Facilities” would refer to the same thing, it believes that referring to materially modified existing interconnections is most clear in this context.

R4. Each applicable Generator Owner shall address the following items in its Facility interconnection requirements: *[Violation Risk Factor: Lower]* *[Time Horizon: Long-Term Planning]*

4.1. Procedures for coordinated studies of new interconnections and their impacts on affected system(s).

4.2. Procedures for notifying those responsible for the reliability of affected system(s) of new interconnections.

M4. Each applicable Generator Owner shall have evidence (such as dated, documented Facility interconnection requirements addressing the procedures) that it met all requirements in Requirement R4.

Rationale for Changes: Applicable Generator Owners were previously included in R3, but have been separated into a different requirement to make clearer that applicable Generator Owners need not be concerned with addressing materially modified interconnections. Otherwise, the requirements for both Transmission Owners and applicable Generator Owners remain exactly the same.

C. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

As defined in the NERC Rules of Procedure, “Compliance Enforcement Authority” (CEA) means NERC or the Regional Entity in their respective roles of monitoring and enforcing compliance with the NERC Reliability Standards.

1.2. Evidence Retention

The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the CEA may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

The Transmission Owner and applicable Generator Owner shall keep data or evidence to show compliance as identified below unless directed by its CEA to retain specific evidence for a longer period of time as part of an investigation:

The responsible entities shall retain documentation as evidence for three years.

If a responsible entity is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time specified above, whichever is longer.

The CEA shall keep the last audit records and all requested and submitted subsequent audit records.

1.3. Compliance Monitoring and Assessment Processes:

Compliance Audit

Self-Certification

Spot Check

Compliance Investigation

Self-Reporting

Complaint

1.4. Additional Compliance Information

None

Table of Compliance Elements

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	Long-term Planning	Lower	N/A	<p>The Transmission Owner documented Facility interconnection requirements and updated them as needed, but failed to make them available upon request.</p> <p>OR</p> <p>The Transmission Owner documented Facility interconnection requirements and made them available upon request, but failed to update them as needed.</p> <p>OR</p> <p>The Transmission Owner documented Facility interconnection requirements, updated them as needed, and made them available upon request, but</p>	<p>The Transmission Owner documented Facility interconnection requirements, but failed to update them as needed and failed to make them available upon request.</p> <p>OR</p> <p>The Transmission Owner documented Facility interconnection requirements, updated them as needed, and made them available upon request, but failed to address interconnection requirements for two of the Facilities as specified in R1, Parts R1.1, R1.2, or R1.3.</p>	<p>The Transmission Owner did not document Facility interconnection requirements.</p>

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				failed to address interconnection requirements for one of the Facilities as specified in <u>R1, Parts R1.1, R1.2, or R1.3.</u>		
R2	Long-term Planning	Lower	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 45 calendar days but less than or equal to 60 calendar days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner’s existing Facility that is used to interconnect to the interconnected Transmission systems.	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 60 calendar days but less than or equal to 70 calendar days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner’s existing Facility that is used to interconnect to the interconnected Transmission systems.	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 70 calendar days but less than or equal to 80 calendar days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner’s existing Facility that is used to interconnect to the interconnected Transmission systems.	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 80 calendar days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner’s existing Facility that is used to interconnect to the interconnected Transmission systems.

R3	Long-term Planning	Lower	N/A	N/A	The Transmission Owner or applicable Generator Owner addressed either <u>R3, Part R3.1</u> or <u>Part R3.2</u> in its Facility interconnection requirements, but did not address both.	The Transmission Owner or applicable Generator Owner addressed neither <u>R3, Part R3.1</u> nor <u>Part R3.2</u> in its Facility interconnection requirements.
<u>R4</u>	<u>Long-term Planning</u>	<u>Lower</u>	<u>N/A</u>	<u>N/A</u>	<u>The applicable Generator Owner addressed either R4, Part 4.1 or Part 4.2 in its Facility interconnection requirements, but did not address both.</u>	<u>The applicable Generator Owner addressed neither R4, Part 4.1 nor Part 4.2 in its Facility interconnection requirements.</u>

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

None.

Guidelines and Technical Basis

Entities should have documentation to support the technical rationale for determining whether an existing Facility interconnection was “materially modified.” Recognizing that what constitutes a “material modification” will vary from entity to entity, the intent is for this determination to be based on engineering judgment.

Requirement R3:

Originally the Psubparts of R3, with the exception of the first two bullets, which were added by the Project 2010-02 drafting team, this list has been moved to the Guidelines and Technical Basis section to provide entities with the flexibility to determine the Facility interconnection requirements that are technically appropriate for their respective Facilities. Including them as Psubparts of R3 was deemed too prescriptive, as frequently some items in the list will-do not apply to all applicable entities – and some applicable entities will have requirements that expand upon-are not included in this list.

Each Transmission Owner and applicable Generator Owner should consider the following items in the development of Facility interconnection requirements:

- Procedures for requesting a new Facility interconnection or material modification to an existing interconnection
- Data required to properly study the ~~new~~-interconnection
- Voltage level and MW and MVAR capacity or demand at the point of interconnection
- Breaker duty and surge protection
- System protection and coordination
- Metering and telecommunications
- Grounding and safety issues
- Insulation and insulation coordination
- Voltage, Reactive Power (including specifications for minimum static and dynamic reactive power requirements), and power factor control
- Power quality impacts
- Equipment ratings
- Synchronizing of Facilities
- Maintenance coordination

Application Guidelines

- Operational issues (abnormal frequency and voltages)
- Inspection requirements for ~~existing or~~ new or materially modified existing Facilities interconnections
- Communications and procedures during normal and emergency operating conditions

~~The Transmission Owner's or applicable Generator Owner's Facility interconnection requirements should ensure that by the time of interconnection, the interconnecting Facility will be able to comply with all applicable NERC Reliability Standards.~~