

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~~~~Dates of posting~~).
2. SC authorized moving the SAR forward to standard development (~~March 31, 2014~~~~SC meeting date when authorized~~).

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 |
| Recirculation ballot | July 2014 |
| BOT adoption | August 2014 |

Effective Dates

~~The first day of the first calendar quarter six months after applicable regulatory approval; or in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter six months after Board of Trustees' adoption.~~

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 |
| 0 | January 13, 2006 | Removed duplication of "Regional Reliability Organizations(s). | Errata |
| 1 | August 5, 2010 | Modified to address Order No. 693 Directives contained in paragraph 693. Adopted by the NERC Board of Trustees. | Revised |
| 1 | February 7, 2013 | R2 and associated elements approved by NERC Board of Trustees for retirement as part of the Paragraph 81 project (Project 2013-02) pending applicable regulatory approval. | |
| 1 | November 21, 2013 | R2 and associated elements approved by FERC for retirement as part of the Paragraph 81 project (Project 2013-02) | |
| <u>2</u> | | <u>Revisions to implement the recommendations of the FAC Five-Year Review Team.</u> | <u>Revision under Project 2010-02</u> |

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 Studies~~Coordination of Plans for New Generation, Transmission, and End-User Facilities~~
2. **Number:** FAC-002-~~21~~
3. **Purpose:** To evaluate the impact of interconnecting new or materially modified Facilities on the Bulk Electric System by conducting and coordinating studies. To avoid adverse impacts on reliability, Generator Owners and Transmission Owners and electricity end-users must meet facility connection and performance requirements.
~~3.~~
4. **Applicability:**
 - 4.1. **Functional Entities:**
 - 4.1.1 Planning Coordinator
 - ~~4.1.1~~ Transmission Planner
 - 4.1.2 ~~Generator Owner~~
 - 4.1.3 Transmission Owner
 - 4.1.4 Distribution Provider
 - ~~4.1.4~~ Generator Owner
 - 4.1.5
 - 4.1.6 Applicable Generator Owner
 - 4.1.6.1 Generator Owner with an 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.
 - ~~4.1.6~~ Load-Serving Entity
 - 4.1.7 ~~Transmission Planner~~
 - ~~4.1.8~~ Planning Authority
5. **Background:**

~~Text~~The objective of FAC-002 is to ensure that the entities involved in the integration of new or materially modified Facilities conduct and coordinate studies before any interconnection occurs so that the interconnection is determined to be technically feasible and reliable. This objective supports reliability principle 1, which states that "interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Reliability Standards."

B. Requirements and Measures

R1. ~~The Each Generator Owner, Transmission Owner, Distribution Provider, and Load-Serving Entity seeking to integrate Transmission Planner and each Planning Coordinator shall conduct studies on the reliability impact of integrating new or materially modified generation facilities, transmission facilities, and or electricity end-user facilities shall each coordinate and cooperate on its assessments with its Transmission Planner and Planning Authority Facilities. -The assessment studies shall include: [Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]~~

Rationale for Changes: The SDT separated the original R1 into multiple requirements to add clarity and better distinguish the actions required of the applicable entities. The Transmission Planner's and Planning Coordinator's primary responsibility is conducting studies.

~~1.1. Evaluation of the reliability impact of the new or materially modified Facilities on affected system(s); facilities and their connections on the interconnected transmission systems.~~

~~1.2. Ensurance of compliance with NERC Reliability Standards and applicable Regional, subregional, Power Pool, and individual system planning criteria and facility connection requirements.~~

~~1.3.1.1. Evidence that the parties involved in the assessment have coordinated and cooperated on the assessment of the reliability impacts of new facilities on the interconnected transmission systems. While these studies may be performed independently, the results shall be jointly evaluated and coordinated by the entities involved.~~

~~1.2. Evaluation of compliance with applicable NERC Reliability Standards; regional and Transmission Owner planning criteria; and Facility interconnection requirements;~~

~~1.4.1.3. Evidence that the assessment included sSteady-state, short-circuit, and dynamics studies as necessary to evaluate system performance under both normal and contingency conditions in accordance with Reliability Standards TPL-001-0, TPL-002-0, and TPL-003-0; and.~~

~~1.4. Documentation that the assessment included study assumptions, system performance, alternatives considered, and jointly coordinated recommendations. While these studies may be performed independently, the results shall be evaluated and coordinated by the entities involved.~~

~~1.5.~~

M1. ~~The Each Planning Authority, Transmission Planner and each Planning Coordinator shall have evidence (such as study reports, including documentation of reliability issues) that it met all requirements in Requirement R1, Generator Owner, Transmission Owner, Load-Serving Entity, and Distribution Provider's documentation of its assessment of the reliability impacts of new facilities shall address all items in Reliability Standard FAC-002-0-R1.~~

R2. Each Generator Owner seeking to interconnect generation Facilities shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator, including but not limited to the provision of data as described in R1.1-R1.3. [Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]

Rationale for Changes: The SDT separated the original R1 into multiple requirements to add clarity and better distinguish the actions required of the applicable entities. The Generator Owner's primary responsibilities are coordinating and cooperating with the Transmission Planner and Planning Coordinator as studies are conducted.

M2. Each Generator Owner shall have evidence (such as documents containing the data provided in response to the requests of the Transmission Planner or Planning Coordinator) that it met all requirements in Requirement R2.

R3. Each Transmission Owner, each Distribution Provider, and each Load-Serving Entity seeking to interconnect transmission Facilities or electricity end-user Facilities shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator, including but not limited to the provision of data as described in R1.1-R1.3. [Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]

Rationale for Changes: The SDT separated R1 into multiple requirements to add clarity and better distinguish the actions required of the applicable entities. The Transmission Owner's, Distribution Provider's, and Load-Serving Entity's primary responsibilities are coordinating and cooperating with the Transmission Planner and Planning Coordinator as studies are conducted.

M3. Each Transmission Owner, each Distribution Provider, and each Load-Serving Entity shall have evidence (such as documents containing the data provided in response to the requests of the Transmission Planner or Planning Coordinator) that it met all requirements in Requirement R3.

R4. Each Transmission Owner and each applicable Generator Owner shall coordinate and cooperate with its Transmission Planner or Planning Coordinator on studies regarding requested interconnections to its Facilities, including but not limited to the provision of data as described in R1.1-R1.3. [Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]

Rationale for Changes: The SDT proposed a new requirement, R4, to address a possible gap regarding the responsibilities of the Transmission Owners and applicable Generator Owners that have received requests to interconnect to their Facilities.

M4. Each Transmission Owner and each applicable Generator Owner shall have evidence (such as documents containing the data provided

in response to the requests of the Transmission Planner or Planning Coordinator) that it met all requirements in Requirement R4.

~~R2. The Planning Authority, Transmission Planner, Generator Owner, Transmission Owner, Load-Serving Entity, and Distribution Provider shall each retain its documentation (of its evaluation of the reliability impact of the new facilities and their connections on the interconnected transmission systems) for three years and shall provide the documentation to the Regional Reliability Organization(s) and NERC on request (within 30 calendar days). (Retirement approved by FERC effective January 21, 2014.) [Violation Risk Factor:] [Time Horizon:]~~

Rationale for R5: The retirement of R5 under Paragraph 81 was approved by FERC, effective January 21, 2014.

~~M2. The Planning Authority, Transmission Planner, Generator Owner, Transmission Owner, Load-Serving Entity, and Distribution Provider shall each have evidence of its assessment of the reliability impacts of new facilities and their connections on the interconnected transmission systems is retained and provided to other entities in accordance with Reliability Standard FAC-002-0-R2. (Retirement approved by FERC effective January 21, 2014.)~~

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 Planning Coordinator, Transmission Planner, Transmission Owner, Distribution Provider, Generator Owner, applicable Generator Owner, and Load-Serving Entity 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 | <u>Long-term Planning</u> | <u>Medium</u> | <u>The Transmission Planner or Planning Coordinator conducted studies on the reliability impact of integrating new or materially modified generation, transmission, or electricity end-user Facilities but failed to include in its studies one of the parts in R1.1-R1.4. The Responsible Entity failed to include in their assessment one of the subrequirements.</u> | <u>The Transmission Planner or Planning Coordinator conducted studies on the reliability impact of integrating new or materially modified generation, transmission, or electricity end-user Facilities but failed to include in its studies two of the parts in R1.1-R1.4. The Responsible Entity failed to include in their assessment two of the subrequirements</u> | <u>The Transmission Planner or Planning Coordinator conducted studies on the reliability impact of integrating new or materially modified generation, transmission, or electricity end-user Facilities but Responsible Entity failed to include in their its studies assessment three-three of the subrequirementparts in R1.1-R1.4s.</u> | <u>The Responsible Entity Transmission Planner or Planning Coordinator failed to conduct studies on the reliability impact of integrating new or materially modified generation, transmission, or electricity end-user Facilities. include in their assessment four or more of the subrequirements.</u> |
| R1.1 | | | <u>Not Applicable.</u> | <u>Not Applicable.</u> | <u>Not Applicable.</u> | <u>The responsible entity's assessment did not include the evaluation.</u> |
| R1.2 | | | <u>Not Applicable.</u> | <u>Not Applicable.</u> | <u>Not Applicable.</u> | <u>The responsible entity's assessment did not include the</u> |

| | | | | | | |
|-------------|---------------------------|---------------|---|---|---|---|
| | | | | | | ensurance of compliance. |
| R1.3 | | | Not Applicable. | Not Applicable. | Not Applicable. | The responsible entity's assessment did not include the evidence of coordination. |
| R1.4 | | | Not Applicable. | Not Applicable. | Not Applicable. | The responsible entity's assessment did not include the evidence of the studies. |
| R1.5 | | | Not Applicable. | Not Applicable. | Not Applicable. | The responsible entity's assessment did not include the documentation. |
| R2 | <u>Long-term Planning</u> | <u>Medium</u> | <u>The Generator Owner seeking to interconnect generation Facilities coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in one of the parts in R.1-R1.4.</u> | <u>The Generator Owner seeking to interconnect generation Facilities coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in two of the parts in R.1-R1.4.</u> | <u>The Generator Owner seeking to interconnect generation Facilities coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in three of the parts in R.1-R1.4.</u> | <u>The Generator Owner seeking to interconnect generation Facilities failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator.</u> |

| | | | | | | |
|-----------|---------------------------|---------------|--|--|--|--|
| <u>R3</u> | <u>Long-term Planning</u> | <u>Medium</u> | <u>The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect transmission Facilities or electricity end-user Facilities coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in one of the parts in R.1-R1.4.</u> | <u>The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect transmission Facilities or electricity end-user Facilities coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in two of the parts in R.1-R1.4.</u> | <u>The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect transmission Facilities or electricity end-user Facilities coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in three of the parts in R.1-R1.4.</u> | <u>The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect transmission Facilities or electricity end-user Facilities failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator.</u> |
| <u>R4</u> | <u>Long-term Planning</u> | <u>Medium</u> | <u>The Transmission Owner or applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities, but failed to provide data necessary to perform studies as</u> | <u>The Transmission Owner or applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities, but failed to provide data necessary to perform studies as</u> | <u>The Transmission Owner or applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities, but failed to provide data necessary to perform studies as</u> | <u>The Transmission Owner or applicable Generator Owner failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities.</u> |

| | | | <u>described in one of the parts in R.1-R1.4.</u> | <u>described in two of the parts in R.1-R1.4.</u> | <u>described in three of the parts in R.1-R1.4.</u> | |
|-----------|--|--|---|---|--|--|
| R2 | | | The responsible entity provided the documentation more than 30 calendar days, but not more than 45 calendar days, after a request. | The responsible entity provided the documentation more than 45 calendar days, but not more than 60 calendar days, after a request. | The responsible entity provided the documentation more than 60 calendar days, but not more than 120 calendar days, after a request. | The responsible entity provided the documentation more than 120 calendar days after a request or was unable to provide the documentation. |

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 a Facility 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 R1:

Requirement R2:

Requirement R3: