

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 (~~Dates of posting~~ December 18, 2013-January 17, 2014).
2. SC authorized moving the SAR forward to standard development (~~SC meeting date when authorized~~, March 31, 2014)
3. 45-day Formal Comment Period with Parallel Initial Ballot (April 1-May 15, 2014)

Description of Current Draft

~~(Describe the type of action associated with this posting such as 30-day informal comment period, 30-day formal comment period, 45-day formal comment period with parallel initial ballot, 30-day formal comment period with parallel successive ballot, recirculation ballot)~~

Anticipated Actions	Anticipated Date
30-day Formal Comment Period	
45-day Formal Comment Period with Parallel Initial Ballot	<u>April 2014</u>
30-day Formal Comment Period with Parallel Successive Ballot <u>Final Ballot</u>	<u>June 2014</u>
Recirculation ballot	
BOT adoption <u>Adoption</u>	<u>August 2014</u>

Effective Dates

The first day of the first calendar quarter ~~six months~~ that is one year after the date that this standard is approved by an applicable ~~regulatory approval;~~ governmental authority or as otherwise provided for in ~~those jurisdictions~~ a jurisdiction where ~~no regulatory~~ 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 ~~six months~~ that is one year after the date this standard is adopted by the NERC Board of ~~Trustees'~~ ~~adoption.~~ 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.

Term: ~~definition~~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: Coordination of Plans for New Generation, Transmission, and End-User Facilities~~

1. Title: Facility Interconnection Studies

2. Number: FAC-002-1~~2~~

~~3. Purpose: To avoid adverse impacts on reliability, Generator Owners and Transmission Owners and electricity end-users must meet facility connection and performance requirements.~~

3. Purpose: To study the impact of interconnecting new or materially modified Facilities on the Bulk Electric System.

4. Applicability:

4.1. Functional Entities:

~~4.1.1 Planning Coordinator~~

~~4.1.14.1.2 Generator Owner~~

~~4.1.24.1.3 Transmission Planner~~

~~4.1.34.1.4 Transmission Owner~~

~~4.1.44.1.5 Distribution Provider~~

~~4.1.54.1.6 Generator Owner~~

~~4.1.7 Applicable Generator Owner~~

~~4.1.7.1 Generator Owner with a fully executed 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.~~

~~4.1.64.1.8 Load-Serving Entity~~

~~4.1.74.1.9 Transmission Planner~~

~~4.1.8 Planning Authority~~

5. Background:

~~Text~~

B. Requirements and Measures

R1. The Generator Owner, Each Transmission Owner, Distribution Provider, Planner and Load-Serving Entity seeking to integrate each Planning Coordinator shall study the reliability impact of: (i) interconnecting new 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. The assessment~~Facilities and (ii) materially modifying existing interconnections of generation, transmission, or electricity end-user Facilities. The following shall include~~be studied: [Violation Risk Factor:] [Medium] [Time Horizon: Long-term Planning]~~

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

~~1.2. Ensurance of compliance with~~Adherence to applicable NERC Reliability Standards ~~and applicable Regional, subregional, Power Pool, and individual system;~~ regional and Transmission Owner planning criteria; ~~and facility connection~~Facility interconnection requirements;

~~1.3. 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.~~

~~1.4.1.3. Evidence that the assessment included steady~~Steady-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

~~1.5.1.4. Documentation that the assessment included study~~Study assumptions, system performance, alternatives considered, and ~~jointly~~jointly coordinated recommendations. ~~While these studies may be performed independently, the results shall be evaluated and coordinated by the entities involved.~~

~~The Planning Authority,~~

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

~~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:]~~

~~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.)~~

- R2.** Each Generator Owner seeking to interconnect new generation Facilities, or to materially modify existing interconnections of 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, Parts 1.1-1.4. [Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]
- 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 new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of 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, Parts 1.1-1.4. [Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]
- 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 shall coordinate and cooperate with its Transmission Planner or Planning Coordinator on studies regarding requested new or materially modified interconnections to its Facilities, including but not limited to the provision of data as described in R1, Parts 1.1-1.4. [Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]
- M4.** Each Transmission 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.
- R5.** 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, Parts 1.1-1.4. [Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]

M5. 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 R5.

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 ~~Reliability Planning Coordinator and Transmission Operator 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
<u>R1</u>	<u>Long-term Planning</u>	<u>Medium</u>	<u>The Transmission Planner or Planning Coordinator studied the reliability impact of: (i) interconnecting new generation, transmission, or electricity end-user Facilities, and (ii) materially modifying existing interconnections of generation, transmission, or electricity end-user Facilities, but failed to study one of the Parts (R1, 1.1-1.4).</u>	<u>The Transmission Planner or Planning Coordinator studied the reliability impact of: (i) interconnecting new generation, transmission, or electricity end-user Facilities, and (ii) materially modifying existing interconnections of generation, transmission, or electricity end-user Facilities but failed to study two of the Parts (R1, 1.1-1.4).</u>	<u>The Transmission Planner or Planning Coordinator studied the reliability impact of: (i) interconnecting new generation, transmission, or electricity end-user Facilities, and (ii) materially modifying existing interconnections of generation, transmission, or electricity end-user Facilities but failed to study three of the Parts (R1, 1.1-1.4).</u>	<u>The Transmission Planner or Planning Coordinator failed to study the reliability impact of: interconnecting new generation, transmission, or electricity end-user Facilities, and (ii) materially modifying existing interconnections of generation, transmission, or electricity end-user Facilities.</u>
<u>R1R2</u>	<u>Long-term Planning</u>	<u>Medium</u>	<u>The Responsible Entity failed to include in their assessment one of the subrequirements. The Generator Owner seeking to interconnect new generation Facilities, or to materially</u>	<u>The Responsible Entity failed to include in their assessment two of the subrequirements. The Generator Owner seeking to interconnect new generation Facilities, or to materially</u>	<u>The Responsible Entity failed to include in their assessment three of the subrequirements. The Generator Owner seeking to interconnect new generation Facilities,</u>	<u>The Responsible Entity failed to include in their assessment four or more of the subrequirements. The Generator Owner seeking to interconnect new generation Facilities,</u>

			<u>modify existing interconnections of 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 (R1, 1.1-1.4).</u>	<u>modify existing interconnections of 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 (R1, 1.1-1.4).</u>	<u>or to materially modify existing interconnections of 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 (R1, 1.1-1.4).</u>	<u>or to materially modify existing interconnections of generation Facilities, failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator.</u>
R1.1			Not Applicable.	Not Applicable.	Not Applicable.	The responsible entity's assessment did not include the evaluation.
R1.2R3	<u>Long-term Planning</u>	<u>Medium</u>	Not Applicable. <u>The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of transmission Facilities or electricity end-user</u>	Not Applicable. <u>The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of transmission Facilities or electricity end-user</u>	Not Applicable. <u>The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of transmission Facilities or electricity end-user</u>	The responsible entity's assessment did not include the ensurance of compliance. <u>The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify</u>

			<u>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 (R1, 1.1-1.4).</u>	<u>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 (R1, 1.1-1.4).</u>	<u>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 (R1, 1.1-1.4).</u>	<u>existing interconnections of transmission Facilities or electricity end-user Facilities, failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator.</u>
R1.3			<u>Not Applicable.</u>	<u>Not Applicable.</u>	<u>Not Applicable.</u>	<u>The responsible entity's assessment did not include the evidence of coordination.</u>
R1.4R4	<u>Long-term Planning</u>	<u>Medium</u>	<u>Not Applicable. The Transmission Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested new or materially modified interconnections to its Facilities, but failed to provide data necessary to perform studies as described in one of the Parts (R1, 1.1-1.4).</u>	<u>Not Applicable. The Transmission Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested new or materially modified interconnections to its Facilities, but failed to provide data necessary to perform studies as described in two of the Parts (R1, 1.1-1.4).</u>	<u>Not Applicable. The Transmission Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested new or materially modified interconnections to its Facilities, but failed to provide data necessary to perform studies as described in three of the Parts (R1, 1.1-1.4).</u>	<u>The responsible entity's assessment did not include the evidence of the studies. The Transmission Owner failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator regarding requested new or materially modified interconnections to its Facilities.</u>

R1.5			Not Applicable.	Not Applicable.	Not Applicable.	The responsible entity's assessment did not include the documentation.
R2R5	<u>Long-term Planning</u>	<u>Medium</u>	The responsible entity provided the documentation more than 30 calendar days, but not more than 45 calendar days, after a request. The 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 described in one of the Parts (R1, 1.1-1.4).	The responsible entity provided the documentation more than 45 calendar days, but not more than 60 calendar days, after a request. The 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 described in two of the Parts (R1, 1.1-1.4).	The responsible entity provided the documentation more than 60 calendar days, but not more than 120 calendar days, after a request. The 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 described in three of the Parts (R1, 1.1-1.4).	The responsible entity provided the documentation more than 120 calendar days after a request or was unable to provide the documentation. The applicable Generator Owner failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities.

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

None.

Guidelines and Technical Basis

Requirement R1:

Requirement R2:

Requirement R3: Entities should have documentation to support the technical rationale for determining whether an existing 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.