A. Introduction

1. Title: Facility Interconnection Studies
2. Number: FAC-002-2
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
      4.1.2 Transmission Planner
      4.1.3 Transmission Owner
      4.1.4 Distribution Provider
      4.1.5 Generator Owner
      4.1.6 Applicable Generator Owner
         4.1.6.1 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.
      4.1.7 Load-Serving Entity
5. 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.

B. Requirements and Measures

R1. Each Transmission Planner and each Planning Coordinator shall study 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. The following shall be studied:
   [Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]
   1.1. The reliability impact of the new interconnection, or materially modified existing interconnection, on affected system(s):
   1.2. Adherence to applicable NERC Reliability Standards; regional and Transmission Owner planning criteria; and Facility interconnection requirements;
   1.3. Steady-state, short-circuit, and dynamics studies, as necessary, to evaluate system performance under both normal and contingency conditions; and
1.4. Study assumptions, system performance, alternatives considered, and coordinated recommendations. While these studies may be performed independently, the results shall be evaluated and coordinated by the entities involved.

M1. Each Transmission Planner or each Planning Coordinator shall have evidence (such as study reports, including documentation of reliability issues) that it met all requirements in Requirement R1.

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 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

<table>
<thead>
<tr>
<th>R#</th>
<th>Time Horizon</th>
<th>VRF</th>
<th>Violation Severity Levels</th>
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<tr>
<td></td>
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<td>Lower VSL</td>
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<tr>
<td>R1</td>
<td>Long-term Planning</td>
<td>Medium</td>
<td>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).</td>
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<tr>
<td>R2</td>
<td>Long-term Planning</td>
<td>Medium</td>
<td>The Generator Owner seeking to interconnect new generation Facilities, or to materially modify existing interconnections of generation Facilities, coordinated and cooperated on studies</td>
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<tr>
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<td>Long-term Planning</td>
<td>Medium</td>
<td>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 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).</td>
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<tr>
<td>R4</td>
<td>Long-term Planning</td>
<td>Medium</td>
<td>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).</td>
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<tr>
<td>R5</td>
<td>Long-term Planning</td>
<td>Medium</td>
<td>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).</td>
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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 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.

Version History

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Action</th>
<th>Change Tracking</th>
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<tr>
<td>0</td>
<td>April 1, 2005</td>
<td>Effective Date</td>
<td>New</td>
</tr>
<tr>
<td>0</td>
<td>January 13, 2006</td>
<td>Removed duplication of “Regional Reliability Organizations(s).”</td>
<td>Errata</td>
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<tr>
<td>1</td>
<td>August 5, 2010</td>
<td>Modified to address Order No. 693 Directives contained in paragraph 693. Adopted by the NERC Board of Trustees.</td>
<td>Revised</td>
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<tr>
<td>1</td>
<td>February 7, 2013</td>
<td>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.</td>
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<tr>
<td>1</td>
<td>November 21, 2013</td>
<td>R2 and associated elements approved by FERC for retirement as part of the Paragraph 81 project (Project 2013-02)</td>
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<td>August 14, 2014</td>
<td>Adopted by the Board of Trustees.</td>
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