

# Implementation Plan

## Project 2012-13 Nuclear Plant Interface Coordination

### Requested Approvals

- NUC-001-3 – Nuclear Plant Interface Coordination

### Requested Retirements

- NUC-001-2.1 – Nuclear Plant Interface Coordination

### Prerequisite Approvals

None

### Revisions to Defined Terms in the NERC Glossary

None

### Background

The Project 2012-13 Nuclear Power Interface Coordination Standards Drafting Team (NPIC SDT) seeks to implement the changes that were proposed by the NUC-001-2.1 Five Year Review Team (FYTR). The NUC FYRT was appointed by the Standards Committee Executive Committee on April 22, 2013. The NUC FYRT reviewed the NUC-001-2.1 standard to identify opportunities for consolidation and additional improvements. The NUC FYRT posted for industry comment its recommendation to revise NUC-001-2.1 on July 27, 2013. The NUC FYRT considered comments and submitted to the Standards Committee its final recommendation to revise NUC-001-2.1, along with a Standards Authorization Request (SAR) on October 17, 2013. The Standards Committee accepted the recommendation of the FYRT and appointed the team as the NPIC SDT to implement the recommendation.

### **Applicable Entities**

- Nuclear Plant Generator Operators.
- Transmission Entities shall mean all entities that are responsible for providing services related to Nuclear Plant Interface Requirements (NPIRs). Such entities may include one or more of the following:
  - Transmission Operators.
  - Transmission Owners.
  - Transmission Planners.
  - Transmission Service Providers.
  - Balancing Authorities.
  - Reliability Coordinators.
  - Planning Coordinators.
  - Distribution Providers.
  - Load-serving Entities.
  - Generator Owners.
  - Generator Operators.

**Effective Date**

First day of the first calendar quarter that is twelve months beyond the date that this standard is approved by applicable regulatory authorities 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 twelve s months after the date this standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

**Standards for Retirement**

Midnight of the day immediately prior to the Effective Date of NUC-001-3 in the particular jurisdiction in which the new standard is becoming effective.

**Revisions or Retirements to Already Approved Standards**

The following tables identify the sections of the approved standard that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
<p>NUC-001-2.1</p> <p><b>R5.</b> The Nuclear Plant Generator Operator shall operate per the Agreements developed in accordance with this standard. <i>[Violation Risk Factor: High] [Time Horizon: None]</i></p> <p><b>R7.</b> Per the Agreements developed in accordance with this standard, the Nuclear Plant Generator Operator shall inform the applicable Transmission Entities of actual or proposed changes to nuclear plant design, configuration, operations, limits, Protection Systems, or capabilities that may impact the ability of the electric system to meet the NPIRs. <i>[Violation Risk Factor: High] [Time Horizon: None]</i></p> <p><b>R8.</b> Per the Agreements developed in accordance with this standard, the applicable Transmission Entities shall inform the Nuclear Plant Generator Operator of actual or proposed changes to electric system design, configuration, operations, limits, Protection Systems, or capabilities that may impact the ability of the electric system to meet the NPIRs. <i>[Violation Risk Factor: High] [Time Horizon: ]</i></p>	<p>NUC-001-3</p> <p><b>R5.</b> Per the Agreements developed in accordance with this standard, the Nuclear Plant Generator Operator shall operate the nuclear plant to meet the NPIRs. <i>[Violation Risk Factor: High] [Time Horizon: Operations Planning ]</i></p> <p><b>R7.</b> Per the Agreements developed in accordance with this standard, the Nuclear Plant Generator Operator shall inform the applicable Transmission Entities of actual or proposed changes to nuclear plant design (e.g., protective relay setpoints), configuration, operations, limits, or capabilities that may impact the ability of the electric system to meet the NPIRs. <i>[Violation Risk Factor: High] [Time Horizon: Long-term Planning]</i></p> <p><b>R8.</b> Per the Agreements developed in accordance with this standard, the applicable Transmission Entities shall inform the Nuclear Plant Generator Operator of actual or proposed changes to electric system design (e.g., protective relay setpoints), configuration, operations, limits, , or capabilities that may impact the ability of the electric system to meet the NPIRs. <i>[Violation Risk Factor: High] [Time Horizon: Long-term Planning]</i></p>
<p><b>Notes:</b></p>	

R9. The Nuclear Plant Generator Operator and the applicable Transmission Entities shall include, as a minimum, the following elements within the agreement(s) identified in R2: [Violation Risk Factor: Medium] [Time Horizon: ]

9.1. Administrative elements:

9.1.1. Definitions of key terms used in the agreement.

9.1.2. Names of the responsible entities, organizational relationships, and responsibilities related to the NPIRs.

9.1.3. A requirement to review the agreement(s) at least every three years. A dispute resolution mechanism.

9.2. Technical requirements and analysis:

9.2.1. Identification of parameters, limits, configurations, and operating scenarios included in the NPIRs and, as applicable, procedures for providing any specific data not provided within the Agreement.

9.2.2. Identification of facilities, components, and configuration restrictions that are essential for meeting the NPIRs.

9.2.3. Types of planning and operational analyses performed specifically to support the NPIRs, including the frequency of studies and types of Contingencies and scenarios required.

9.3. Operations and maintenance coordination

9.3.1. Designation of ownership of electrical facilities at the interface between the electric system and the nuclear plant and responsibilities for operational control coordination and maintenance of these facilities.

9.3.2. Identification of any maintenance requirements for equipment not owned or controlled by the Nuclear Plant Generator Operator that are necessary to meet the NPIRs.

9.3.3. Coordination of testing, calibration and maintenance of on-site and off-site power supply systems and related components.

9.3.4. Provisions to address mitigating actions needed to avoid violating NPIRs and to address periods when responsible

R9. The Nuclear Plant Generator Operator and the applicable Transmission Entities shall include the following elements in aggregate within the Agreement(s) identified in R2.

- Where multiple Agreements with a single Transmission Entity are put into effect, the R9 elements must be addressed in aggregate within the Agreements; however, each Agreement does not have to contain each element. The Nuclear Plant Generator Operator and the Transmission Entity are responsible for ensuring all the R9 elements are addressed in aggregate within the Agreements.

- Where Agreements with multiple Transmission Entities are required, the Nuclear Plant Generator Operator is responsible for ensuring all the R9 elements are addressed in aggregate within the Agreements with the Transmission Entities. The Agreements with each Transmission Entity do not have to contain each element; however, the Agreements with the multiple Transmission Entities, in the aggregate, must address all R9 elements. For each Agreement(s), the Nuclear Plant Generator Operator and the Transmission Entity are responsible to ensure the Agreement(s) contain(s) the elements of R9 applicable to that Transmission Entity. : [Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]

9.1. Not used.

9.2. Technical requirements and analysis:

9.2.1. Identification of parameters, limits, configurations, and operating scenarios included in the NPIRs and, as applicable, procedures for providing any specific data not provided within the Agreement.

9.2.2. Identification of facilities, components, and configuration restrictions that are essential for meeting the NPIRs.

9.2.3. Types of planning and operational analyses performed specifically to support the NPIRs, including the frequency of studies and types of Contingencies and scenarios required.

Transmission Entity loses the ability to assess the capability of the electric system to meet the NPIRs. These provisions shall include responsibility to notify the Nuclear Plant Generator Operator within a specified time frame.

9.3.5. Provision for considering, within the restoration process, the requirements and urgency of a nuclear plant that has lost all off-site and on-site AC power.

9.3.6. Coordination of physical and cyber security protection of the Bulk Electric System at the nuclear plant interface to ensure each asset is covered under at least one entity's plan.

9.3.7. Coordination of the NPIRs with transmission system Special Protection Systems and underfrequency and undervoltage load shedding programs.

9.4. Communications and training Administrative elements:

9.4.1. Provisions for communications between the Nuclear Plant Generator Operator and Transmission Entities, including communications protocols, notification time requirements, and definitions of terms.

9.4.2. Provisions for coordination during an off-normal or emergency event affecting the NPIRs, including the need to provide timely information explaining the event, an estimate of when the system will be returned to a normal state, and the actual time the system is returned to normal.

9.4.3. Provisions for coordinating investigations of causes of unplanned events affecting the NPIRs and developing solutions to minimize future risk of such events.

9.4.4. Provisions for supplying information necessary to report to government agencies, as related to NPIRs.

9.4.5. Provisions for personnel training, as related to NPIRs.

9.3. Operations and maintenance coordination

9.3.1. Designation of ownership of electrical facilities at the interface between the electric system and the nuclear plant and responsibilities for operational control coordination and maintenance of these facilities.

9.3.2. Identification of any maintenance requirements for equipment not owned or controlled by the Nuclear Plant Generator Operator that are necessary to meet the NPIRs.

9.3.3. Coordination of testing, calibration and maintenance of on-site and off-site power supply systems and related components.

9.3.4. Provisions to address mitigating actions needed to avoid violating NPIRs and to address periods when responsible Transmission Entity loses the ability to assess the capability of the electric system to meet the NPIRs. These provisions shall include responsibility to notify the Nuclear Plant Generator Operator within a specified time frame.

9.3.5. Provision for considering, within the restoration process, the requirements and urgency of a nuclear plant that has lost all off-site and on-site AC power.

9.3.6. Coordination of physical and cyber security protection at the nuclear plant interface to ensure each asset is covered under at least one entity's plan.

9.3.7. Coordination of the NPIRs with transmission system Special Protection Systems and any programs that reduce or shed load based on underfrequency or undervoltage.

9.4. Communications and training Administrative elements:

9.4.1. Provisions for communications affecting the NPIRs between the Nuclear Plant Generator Operator and Transmission Entities, including communications protocols, notification time requirements, and definitions of applicable unique terms.

Already Approved Standard	Proposed Replacement Requirement(s)
	<p>9.4.2. Provisions for coordination during an off-normal or emergency event affecting the NPIRs, including the need to provide timely information explaining the event, an estimate of when the system will be returned to a normal state, and the actual time the system is returned to normal.</p> <p>9.4.3. Provisions for coordinating investigations of causes of unplanned events affecting the NPIRs and developing solutions to minimize future risk of such events.</p> <p>9.4.4. Provisions for supplying information necessary to report to government agencies, as related to NPIRs.</p> <p>9.4.5. Provisions for personnel training, as related to NPIRs.</p>
<p><b>Notes:</b> Requirement R9.1 retired under Paragraph 81 criteria. Retirement approved by FERC January 2014.</p>	