



## **NPCC Operational Review for the Integration of New Facilities Procedure**

**Approved by the NPCC Task Force on Coordination of Operations (TFCO)**

**January 12, 2022**

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Revised: May 17, 2017  
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## 1.0 General Requirement

NPCC has established a Reliability Assessment Program to bring together work done by NPCC, Inc. and its Reliability Coordinators relevant to the assessment of **bulk power system reliability**. The NPCC Regional Reliability Directory #1 – *Design and Operation of the Bulk Power System*, Appendix B - *Guidelines and Procedures for NPCC Transmission Reviews* provides a review that ensures that new facilities are in conformance with the NPCC Directory #1 *Design and Operation of the Bulk Power System*. As part of the Reliability Assessment Program, the Task Force on Coordination of Operation reviews the new facilities that are being placed in-service to ensure that all necessary procedures and training are in place to provide a smooth integration for the operation of the facilities and to confirm operational readiness. This also provides notification to Reliability Coordinators neighboring NPCC of the preparation work done to allow for operation of the new facilities. This procedure is intended to apply to new facilities that, if removed from service, may have a significant, direct or indirect impact on another Reliability Coordinator Area's inter-Area or intra-Area transfer capabilities. The cause of such impact might include stability, voltage, and/or thermal considerations. This document also supplements the Directory 1, Appendix B document to ensure that operations needs are met prior to energization of new facilities that may impact neighboring systems.

## 2.0 Reliability Coordinator Area Presentation and Documentation on Operations Review of New **Bulk Power System** Facilities

Prior to the energization of a new **bulk power system** facility a presentation should be provided at a Task Force on Coordination of Operation (TFCO) meeting by the Reliability Coordinator in whose area the new facility is to be added. This is required to provide assurance that sufficient procedures and training programs are in place to accept the new facility. Accompanying documentation should be provided to the TFCO.

This review by the TFCO does not alter Reliability Coordinator Area and/or Company responsibilities with respect to their system's conformity with the NPCC *Regional Reliability Reference Directory # 1 - Design and Operation of the Bulk Power System*.

For individual, standalone projects, TFCO presentation should be made more than one month before the expected in-service date of the new facilities. If a transmission project, which includes new facility(s) that are subject to the requirements of this procedure (Document C-43), is to be implemented within a Reliability Coordinator Area across multiple phases over an extended period



of time, the responsible Reliability Coordinator will develop and present to the TFCO 1) an overview of the overall project specifying stages and planned TFCO presentations, and 2) updates on new facilities' operational readiness of each phase. RC's presentations of operational readiness update(s) of each phase should be made to the TFCO more than one month before the expected in-service date of the respective portion of the project involving new facilities.

## 2.1 Format of Presentation

### 2.1.1 Review of the Integration Procedures

#### Introduction

Reference the most recent Reliability Coordinator Area Transmission Review—Comprehensive, Intermediate or Interim review, as appropriate, that includes the new facilities in the network representation.

#### Summary of the System Impacts of the New or Modified Facilities

1. Describe the **bulk power system** facilities that were included in the review.
2. Include maps and one-line diagrams of the system showing proposed system changes, as necessary.
3. Provide a summary of the results of system studies conducted to demonstrate the impact of the new facilities.
4. Any exclusion granted under the NPCC Directory #1 - Design and Operation of the Bulk Power System, Appendix E - Guidelines for Requesting Exclusions to Simultaneous Loss of Two Adjacent Transmission Circuits on a Multiple Circuit Tower should be discussed.

### 2.1.2 Operations Integration Requirements

The Reliability Coordinating Area introducing the new facilities should provide documentation to the TFCO that confirms the following items are in place prior to the commercial in-service date.

#### Agreements

1. Necessary agreements among the Reliability Coordinator (RC), Transmission Operator (TOP) and Transmission Owner (TO) have been developed or that existing agreements have been modified to accept the new facilities.
2. Necessary interconnection agreements are in place between neighboring Transmission Operators, Balancing Authorities and Reliability



Coordinators to ensure that new joint interconnection facilities can be operated effectively.

## Authority

Operating authority for the new facilities has been established among the affected RC and TOP.

## Training

Training programs among the affected RC, TOP and TO have been modified to include the new facilities or that specific supplemental training has been provided.

## Operating Procedures

Operating procedures associated with the new facilities have been established and/or modified. New or modified Remedial Action Schemes and Dynamic Control Systems are addressed by other NPCC documents.

## Outage Coordination and Communication

The affected RC, TOP and TO have coordinated and arranged both outages and procedures to accept the new facilities.

## Operating Tools

Energy Management System (EMS) modifications are in place to accommodate the new facilities.

## Real Time Monitoring

Network representation changes to system models used for real time monitoring are being implemented. In addition, confirm that all necessary alarm changes are being implemented.

## Coordination with Neighboring Areas

Confirm that acceptance of the new facilities, which are tie lines or which impact neighboring systems, has been coordinated with neighboring Reliability Coordinator Areas within NPCC and outside NPCC. The coordination process should follow the specifications of the interconnection agreements among the neighboring Reliability Coordinators.

## Nomenclature



The affected RCs, TOPs and TOs will all use the same nomenclature for the new facilities.

## 2.2 Format of Documentation

The documentation required for an Operations Integration Review should be in the form of a summary report (five pages or less) addressing each of the elements of the above presentation. The report should be accompanied by the Reliability Coordinator Area's **bulk power system** map and one-line diagram, and any summary tables, figures, and appendices needed to address the operation integration aspects of the system addition. If confidentiality is a concern, then the map and one-line sections provided can be limited to whatever is necessary to satisfy the items in section 3.1, above. The report should include references to the Reliability Coordinator Area NPCC Transmission Review, and any other studies performed by the Reliability Coordinator Area or by utilities within the Reliability Coordinator area that are relevant to demonstrating the readiness of the Reliability Coordinator Area to accept the new facilities.

## 3.0 Task Force Follow-Up Procedures for Operations Review of New **Bulk Power System** Facilities

Once a Reliability Coordinator Area has presented its Operational Review presentation and documentation to the TFCO, TFCO will:

1. Review the Reliability Coordinator Area's summary report and any supporting documentation, and:
2. Consider whether to accept the summary report as sufficient to confirm operational readiness. If the report is found to be deficient, TFCO will indicate to the Reliability Coordinator Area the specific areas of deficiency and request the Reliability Coordinator Area to address those deficiencies.
3. The Reliability Coordinator Area will report back to TFCO with the changes made to address the deficiencies. TFCO will consider this report and determine whether any additional follow up work is needed.
4. Upon completion of an Operations Integration Review, the results will be reported to the Reliability Coordinating Committee.

## 4.0 Additional Considerations for Continued Operational Readiness of non-**BPS** New Facilities

If a new facility of a transmission project within a Reliability Coordinator Area is



anticipated/found to have an impact on neighboring system(s) and operations, however, is not identified to be a **bulk power system element** in accordance with *Classification of Bulk Power System Elements* (Document A-10) and, therefore, is not subject to a formal NPCC Operational Review consistent with Sections 2.0 and 3.0 of this document (Document C-43), the respective Reliability Coordinator is encouraged to informally present this information to the TFCO for continued operational readiness and situational awareness.

For individual, standalone projects, the respective Reliability Coordinator is encouraged to informally present to the TFCO more than one month before the expected in-service date of the new facilities. If a transmission project, which includes new facility(s) that are not subject to a formal NPCC Operational Review, is to be implemented within a Reliability Coordinator Area across multiple phases over an extended period of time, the responsible Reliability Coordinator is encouraged to informally present to the TFCO 1) an overview of the overall project specifying stages and planned TFCO presentations, and 2) updates on new facilities' operational readiness of each phase. RC's presentations of operational readiness update(s) of each phase are encouraged to be informally presented to the TFCO more than one month before the expected in-service date of the respective portion of the project involving new facilities.

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Prepared by: Task Force on Coordination of Operation

Review frequency: 3 years

References: *Regional Reliability Reference Directory # 1 Design and Operation of the Bulk Power System*

*NPCC Glossary of Terms*