The Role of NPCC in Reliability Coordination

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Northeast Power Coordinating Council

- Formed in 1966
- 3rd largest Reliability Council
- Provides Reliability Coordination for five control areas:
  - New York
  - Six New England States
  - Ontario
  - Quebec
  - Maritime Provinces
North American Electric Reliability Council

NPCC
- One million square miles
- 40 million people
- 50% US
  50% Canadian
- Represents 70% of Canadian Load

Map showing regions and NPCC highlighted.
NPCC’s Purpose

Promote the reliable and efficient operation of the international, interconnected bulk power systems in Northeastern North America, through:

- Establishment of Reliability Criteria
  - Facilitate Competitive Markets
- Coordination of System Planning, Design and Operations
- Compliance Assessment and Enforcement
Reliability Oversight

The Need for NPCC’s Integrated Reliability Oversight is Greater than Ever:

• Functionally Separate Entities
• Developing Competitive Market Structure Replacing Regulatory Model
• Greater Societal Dependency on Electricity
Northeast in Transition

NPCC Provides Reliability Oversight to Evolving Entities and Developing Markets

Current Status:

• 2 ISO’s
• IMO
• Transco
• Provincial Utility
• IOU
NPCC Support for RTO

NPCC Provides Collaborative Regional Forum to Achieve RTO Objectives, including:

• Characteristics
  - Short-term Reliability

• Functions
  - Parallel Path Flow
  - Planning and Expansion
  - Interregional Coordination
NPCC Reliability Coordination

Regional Program supports RTO Attainment of Short-term Reliability Characteristic

NPCC’s *Membership Agreement* Provides for:

- Open, Inclusive Organizational Structure
- Fair and Non-discriminatory Governance
- Independent and Objective Reliability Assessments
Reliability Program

Accomplished

- Well Established Reliability Criteria
  - Flexibility to Address Specific Local Area Requirements
  - Open Process for Review and Revision
- Criteria Incorporates NERC Standards
- Comprehensive, Objective Reliability Compliance Assessment Program
Reliability Program

Under Development

• NPCC Criteria Reformulation
  - Consistent with NERC Format

• Enforceable NPCC Reliability Compliance Program
  - International in Scope
  - Aligned with Proposed NERC Enforcement
NPCC Reliability Coordination

Provides Wide-Area Support for the Following RTO functions:

- Parallel Path Flow
- Planning and Expansion
- Interregional Coordination
Parallel Path Flow

Accomplished

• Interregional Operational Coordination
• Lake Erie Emergency Redispatch
  - Filed with and Approved by FERC
  - Loop Flow Procedure
  - Generation Shift Factor Tool
• Michigan - Ontario Phase Angle Regulator
Parallel Path Flow

Under Development

• Enhanced Lake Erie Security Process
  - Integrate System Redispatch Methodologies
  - Establish Principals for Non-Emergency Congestion Management
  - Reduce Need for TLRs

• Long-term Market/Reliability Interface Initiative
Planning and Expansion

Accomplished

• Regional Reliability Assessments
  - Analyze Operational Security
  - Review Area Resource and Transmission Adequacy
  - Provide Reliability Signals to Market and Regulators

• Regional Coordinated Planning
  - Proposed Transmission and Resource additions Assessed for System Impacts
Planning and Expansion

Under Development

• Multi-Area Reliability Analysis
  - Region-wide Assessment
  - Address International Interdependency

• Wide-Area Collaborative Planning
  - Mechanism to Combine Proposed Local Plans
  - Process to Achieve Regional Synergies and Efficiencies
Interregional Coordination

Accomplished

• Coordinate Operational Practices with Neighboring Areas
  - Facilitate Interregional Emergency Actions
• Address Loop Flow and Seams Issues
  - Coordinate Seasonal Assessments and Future Year Studies with Neighbors
Interregional Coordination

Under Development

• Coordinate Operation of Control Devices
• Encourage Northeast Market Integration
  - Facilitate Regional Transmission Reservation and Scheduling
• Support Multi-RTO Working Groups
NPCC’s Mission Statement

“NPCC promotes the reliable and efficient operation of the interconnected bulk power systems in Northeastern North America through the establishment of criteria, coordination of system planning, design and operations, and assessment of compliance with such criteria. In the development of reliability criteria, NPCC, to the extent possible, facilitates attainment of fair, effective and efficient competitive electric markets”