



# NPCC 2004 Year in Review

## NPCC Objectives:

- Develop international reliability criteria that meet the specific needs of the Northeast, not inconsistent with NERC reliability standards development.
- Perform independent reliability assessment, monitoring and enforcement of compliance.
- Promote coordination of security and operation among the NPCC Areas.
- Coordinate Area planning processes, system studies of reliability, and the design of bulk power systems.
- Encourage utilization of Market mechanisms to achieve reliability objectives, as appropriate.

## Blackout 2003 Report released

NPCC released the findings and conclusions of its in-depth analysis of the events originating outside of NPCC that resulted in the cascading collapse of a major portion of the NPCC Region on August 14, 2003.

Concrete steps taken by NPCC in 2004 to enhance reliability included:

- the strengthening of its Regional, mandatory reliability criteria (approved by the NPCC Membership in May, 2004);
- the enhancement of the “NPCC Reliability Compliance Program” to include vegetation management and readiness reviews;

- the revision of the “NPCC Regional Reliability Plan” (approved by the NERC Operating Committee at its July, 2004 meeting, thus ensuring that NPCC was in full compliance with the strengthened NERC Operating Policies #5, 6 and 9 for the summer operating period); and,
- the implementation of numerous “lessons learned” from the investigations of the event, including its assessment of the NPCC Areas’ restoration effort.

Following the 2003 power system collapse, NPCC formed the NPCC 2003 Blackout Investigative Team to work in conjunction with the U.S.-Canada Task Force and



NERC. The NPCC assessment involved scores of experts from the United States and Canada, working together, to analyze and simulate, through extensive computer modeling, the events of the blackout.

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## Role of the Regions

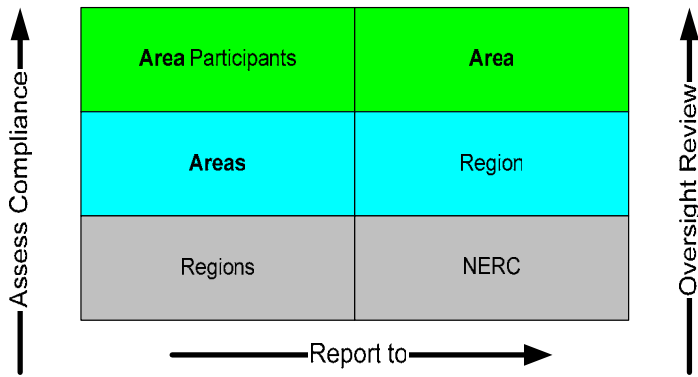
NPCC’s Executive Director, Edward Schwerdt, chaired NERC’s Regional Managers Committee and facilitated development of the report entitled “*Examination of the Future Role of the Regional Reliability Councils and Assessment of Eastern Interconnection Regional Reliability Council Boundaries.*”

The reliability assurance functions and services currently performed by each of the ten Regional Reliability Councils were identified, and the fundamental organizational principles necessary for entities to perform reliability assurance functions and services in the future were established.

In addition, the review of the effectiveness of the existing Regional boundaries within the Eastern Interconnection has initiated discussions among ECAR, MAAC, MAIN and the MRO regarding future consolidation.

## NPCC Continues Improved Compliance Performance

### Compliance Monitoring



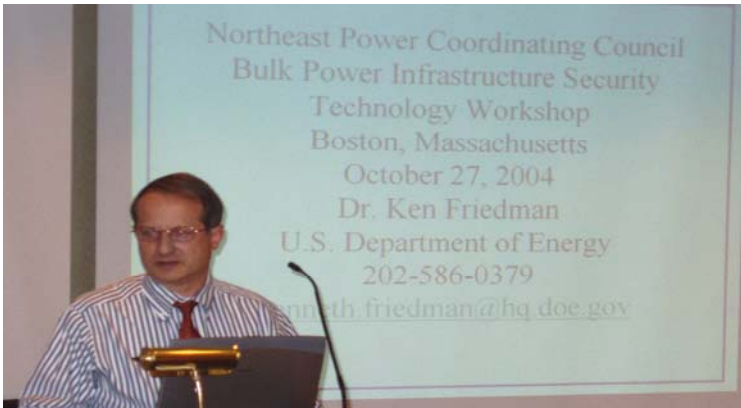
NPCC's Compliance Assessment Summary Report (submitted to NERC in 2004) showed continued improvement on the overall compliance performance and processes within NPCC.

In addition, NPCC completed assessments of the implementation of system restoration critical facilities testing requirements and the NERC urgent action cyber security standard.

Quarterly NPCC compliance assessment and vegetation related outages reports were provided to NERC indicating 100% compliance through the third quarter of 2004 on all measures.

The NPCC Reliability Compliance and Enforcement Program Criteria Document was revised to incorporate enhancements to the compliance templates, processes, and sanction table.

## NPCC Hosts Reliability Forums and Infrastructure Security Workshop



**Dr. Ken Friedman**  
U.S. Department of Energy

NPCC initiated and hosted Pre-Seasonal Reliability Forums to promote the exchange of internal analyses performed by the MAAC, ECAR and NPCC Regions and provide a clearer picture of the expected seasonal conditions.

The Pre-Seasonal Reliability Forums, were held in New York on May 26 and in Philadelphia on December 9-10.

A workshop on Bulk Power Infrastructure Security Technology was also held October 26-27 in Boston.

These events strengthened the institutional framework for reliability management in North America by highlighting the increasing need for NPCC coordination to the west and enhanced operational readiness.

## NPCC Criteria Developments in 2004

Lessons learned from the Blackout 2003 analyses were incorporated into the following NPCC criteria documents in 2004:



- *Basic Criteria for Design and Operation of Interconnected Power Systems;*
- *NPCC Reliability Compliance and Enforcement Program (RCEP);*
- *Guideline for the Implementation of the RCEP;*
- *Emergency Operation Criteria;*
- *Maintenance Criteria for Bulk Power System Protection;*
- *Guide for Analysis and Reporting of Protection System Misoperations;*

- *Guide for Maintenance Microprocessor-based Protection Relays Security;*
- *Guidelines for Protection System Intelligent Electronic Devices.*

In addition, NPCC's CP-9 Working Group coordinated NPCC's Membership concerns and built Regional consensus during NERC's Reliability Standards development.

## Phase II Collaborative Planning Initiative Study Completed

The Northeast Power Coordinating Council CP-10 Working Group completed a study to identify potential inter-Area reliability impacts of projected changes in system facilities associated with each Area's respective transmission plans.

This is a report on the second phase of the CP-10 Collaborative Planning Initiative study effort. Phase II prioritized the potential inter-Area transmission bottle-

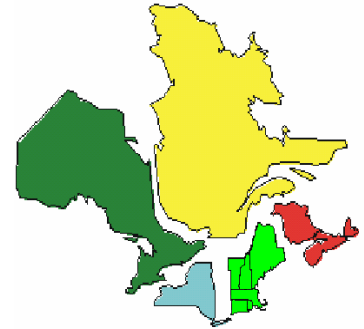
necks, (identified in Phase I) based upon the difference in energy delivered between the constrained and unconstrained transmission system.

The analysis utilized General Electric's MAPS/MWFLOW program to simulate the hourly dispatch of generation to meet load and operating reserve requirements.

GE's MAPS program models the security constrained dispatch

logic utilized to minimize production cost while recognizing the transmission constraints of the system.

The results of the study suggest that the most significant areas of concern within the Northeast Regions are in the vicinity of New York City and Long Island.



## Hourly NPCC Area ATC/TTC values available

NPCC web-based coordination of ATC/TTC values was enhanced to accommodate hourly updates of the posted data and was expanded to include MISO and PJM information prior to the Summer 2004 operating period.

The website addresses seams issues and provides the marketplace with a single repository

that shows hourly ATC and TTC values in both directions from both Area-Region perspectives, clearly denoting differences if they exist and displaying the "minimum."

See: <http://www.nerro.org/flash/npcc.asp>



## NPCC Interconnection Assistance reviewed

NPCC's Reliability Coordinating Committee unanimously approved the CP-8 Working Group's "Review of Interconnection Assistance Reliability Benefits" and accepted the recommendation to update the report in 2006.

The report concluded that the interconnection assistance values

reported by NPCC Areas in their recent resource adequacy assessments appear reasonable and do not overstate interconnection benefits.

A technical paper based on the analysis, entitled "Assessment of NPCC Area Interconnection Reliability Benefits" co-authored

by NPCC and GE Energy won the "Best Paper" award at the HICSS-38 Conference.

Nine of approximately 600 submitted papers were so honored, based on an independent review process.



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We're on the web!  
[www.npcc.org](http://www.npcc.org)

## NPCC Mission

*NPCC establishes the processes that assure the reliable and efficient operation of the international, interconnected bulk power systems in Northeastern North America through development and enforcement of regionally-specific criteria that are not inconsistent with NERC broad-based continent-wide reliability standards. NPCC coordinates system planning, design and operations, assesses reliability, and monitors and enforces mandatory compliance with regional reliability criteria. NPCC, to the extent possible, facilitates attainment of fair, effective and efficient competitive electric markets.*

continue to provide for reliability in the future. Yves Filion, President of TransÉnergie Hydro-Québec spoke at dinner that evening regarding their role.

The meeting concluded with sessions regarding reliable regional integration and critical infrastructure reliability.

Edward Schwerdt, NPCC Executive Director thanked NPCC members for both their time and dedication devoted to the rewriting of NERC Policies 5, 6 & 9, the drafting of the NERC Version "0" Reliability Standards, the post Blackout readiness audits conducted for First Energy, PJM, the MISO, the NYISO, the IMO, and ISO-NE, and completion of the NPCC Regional Reliability Plan.

NPCC's Chairman, Charles J. Durkin, Jr., stated, "The theme of this year's meeting focuses our attention on FERC's emerging reliability role, the new institutional roles proposed in several states and Provinces, and their reliable integration, with consideration of the increasing importance of critical infrastructure reliability. While NPCC has been active "providing for reliability," we cannot afford to relax. NPCC, with your help, remains committed to be, and will be, a leader in reliability assurance."

## NPCC 2004 General Meeting

The NPCC 2004 General Meeting was held at the Mount-Royal Center in Montréal, Québec on September 29-30. This year's theme, "Providing for Reliability," gave participants an opportunity to discuss with U.S. and Canadian policy makers and strategic planners the reliability challenges facing the NPCC Region.

Keynote Speaker Shelton Cannon (Deputy Director of FERC's Office of Markets, Tariffs and Rates) explained the Commission's new Division of Reliability's role of facilitating the reliable and secure operation of the nation's electric power market. Gordon van Welie, President and CEO of ISO-NE, Dave Goulding, President and CEO of the IMO, Garry Brown, the NYISO's Vice President Strategic Development, and Bill Marshall, Director, Strategic Planning Énergie NB described how their respective institutions are planning to



**Shelton Cannon**  
Deputy Director  
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