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**RCC Meeting
March 18, 2004
Agenda Item 17.0**

March 1, 2004

Members, Reliability Coordinating Committee

Re: NPCC Reliability Assessment Program (NRAP) Summary Report

The NPCC Reliability Assessment Program Summary Report has been updated (as of March 1st - see attached) and will be presented at the March 18th Reliability Coordinating Committee meeting.

The full updated NRAP report will be posted in Adobe format in the Current Year NRAP folder on the NPCC Home Page. The URL to the folder is:

<http://www.npcc.org/NRAP.asp?Folder=CurrentYear>

Please note that the full report is only “distributed” with this reference.

Sincerely,

Phil Fedora

Philip A. Fedora
Director, Market Reliability Interface

cc: Members, Compliance Monitoring and Assessment Subcommittee
Members, Task Force on System Studies
Members, Task Force on System Protection
Members, Task Force on Coordination of Planning
Members, Task Force on Coordination of Operation
Members, Task Force on Infrastructure Security and Technology
NPCC Working Group Chairs
NPCC Staff

**NPCC RELIABILITY ASSESSMENT PROGRAM
SUMMARY REPORT**

Page #	PROJECT DESCRIPTION	2004 BUDGET	2004 EXPENSE
3	CO-1 Control Performance Working Group	\$25,000	\$1,900
3	CO-2 Dispatcher Training Working Group	\$30,000	\$0
4	CO-7 Operational Review Working Group	\$5,000	\$0
4	CO-8 System Operations Managers Working Group	\$25,000	\$0
5	C-15 Solar Alert Service	\$15,000	\$15,000
5	CO-10 Operational Tools Working Group	\$15,000	\$0
6	LESPWG Lake Erie Security Process Working Group	\$15,000	\$0
6	ATCWG Available Transfer Capability Working Group	\$5,000	\$0
7	DCWG Data Collection Working Group	\$5,000	\$3,025
7	Inter-ISO Inter-ISO Planning Working Group	\$5,000	\$0
8	IRCWG Inter-Control Area Restoration Coordination Working Group	\$10,000	\$1,300
8	CO-12 Summer Security Assessment Working Group	\$15,000	\$0
9	CP-8 Working Group on Review of Resource and Transmission Adequacy	\$60,000	\$3,500
9	CP-2004 Summer 2004 Multi-Area Probabilistic Reliability Assessment	\$55,000	\$5,175
10	CP-TIE Review of Interconnection Assistance Reliability Benefits	\$25,000	\$17,540
10	CP-9 Review of NERC Reliability Standards Working Group	\$25,000	\$1,550
11	CP-10 Collaborative Planning Initiative	\$10,000	\$0
11	RPF Regional Planning Forum	\$50,000	\$0

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Page #	PROJECT DESCRIPTION	2004 BUDGET	2004 EXPENSE
12	CP-11 <i>NPCC Basic Criteria for Design and Operation of Interconnected Power Systems Review Working Group</i>	\$10,000	\$450
12	JGWG Joint Glossary Working Group	\$5,000	\$0
13	SS-37 Base Case Development Working Group	\$10,000	\$0
13	SS-38 Inter-Area Dynamic Analysis Working Group	\$20,000	\$5,200
13	TRS Transmission Reliability Study	\$50,000	\$0
14	ISTWG Infrastructure Security and Technology Working Group	\$5,000	\$0
14	MEN MAAC-ECAR-NPCC Working Group	\$10,000	\$0
14	MMWG Multiregional Modeling Working Group	\$5,000	\$0
15	NERC-ISN Interregional Security Network (ISN)	\$120,000	\$17,807
	TOTAL	\$630,000¹	\$72,447

¹ At its September 9, 2003 meeting, the Executive Committee approved a recommendation that NPCC's 2004 Regional Budget include \$412,000 in Account #800 "Project Expense." Historically, total expenses have generally ranged from approximately 60 to 80 percent of the annual budget estimate.

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Item	Name	Assignment		
CO-1	Control Performance Working Group	The Working Group insures coordination between adjacent control areas in establishing interchange schedules, reviews time error correction procedures, and monitors the conformance of the Areas with NPCC Control Performance Criteria and Operating Reserve Criteria. At the request of the Task Force on Coordination of Operation (TFCO), it conducts investigations of control performance problems.	2004 Budget:	\$25,000
			Expense to Date:	\$1,900
			Completion Date:	December 2004
	Status/ Comments:	The Control Performance Working Group is currently 1) reviewing the merged draft of former NPCC Documents C-19 and C-20, developing the reserve product naming convention; 2) updating its operating reserve statistics to support or refute the adoption of NPCC reserve sharing, including the establishment of an audit reserve monitoring process (subject to TFCO endorsement); 3) monitoring the implementation of the NERC ACE Diversity Interchange process, reviewing the effectiveness of the NERC Disturbance Control Standard; 4) reviewing appropriate NERC Standard Authorization Requests; and, 5) resolving NPCC inadvertent exchange.		
	NPCC Contact:	Jerry Mosier		

Item	Name	Assignment		
CO-2	Dispatcher Training Working Group	The Working Group establishes a program for system dispatcher training relating to NPCC inter-Area matters, criteria, terminology, policies and operating instructions. It prepares and presents material at dispatcher training sessions, exchanges information on internal dispatcher training methods. The CO-2 Working Group also evaluates and propose new techniques and training aids as they become available.	2004 Budget:	\$30,000
			Expense to Date:	\$0
			Next Seminar:	May 2004
	Status/ Comments:	The next Dispatcher Training Seminar will be held on May 5-6, 2004 in Toronto. A draft Agenda has been completed; this seminar will begin to discuss the lessons learned during restoration following August 14 th .		
	NPCC Contact:	Jerry Mosier		

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Item	Name	Assignment		
CO-7	Operational Review Working Group	To enhance the relationship between the control room personnel and NPCC, and to insure a continued understanding and effective implementation of the criteria and guides.	2004 Budget:	\$5,000
			Expense to Date:	\$0
			Completion Date:	December 2004
	Status/ Comments:	The need for a reformulated Working Group is being considered in light of the NERC Blackout 2003 recommendations.		
	NPCC Contact:	Paul Roman		

Item	Name	Assignment		
CO-8	System Operations Managers Working Group	Provide a forum for the Managers of the NPCC control centers to identify and discuss security concerns in the operation of the interconnected bulk power supply system, and specific concerns related to the integration of operation between and among the evolving ISOs. The System Operations Managers Working Group will also assist the Task Force on Coordination of Operation in their work on issues related to system security and the operation of the ISOs, and provide advice to the TFCO, as requested.	2004 Budget:	\$25,000
			Expense to Date:	\$0
			Completion Date:	December 2004
	Status/ Comments:	The CO-8 Working Group is currently pursuing: 1) the development of operator tutorial tapes for all NPCC Areas to ensure that each Area operator has a wide-area perspective of the bulk electric system and a basic level of understanding of neighboring Areas; 2) closely following the development and implementation of the NERC Functional Model; 3) overseeing the development of the NPCC OSS facilitated Transaction Checkout process; and, 4) discussing the proper implementation of the NERC Energy Emergency Alert.		
	NPCC Contact:	Jerry Mosier		

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Item	Name	Assignment		
C-15	Solar Alert Service	Procedures are established providing for the reporting channels and information available to the operator during solar alerts and suggesting measures that may be taken to mitigate the impact of a solar magnetic disturbance.	Latest Version:	March 2003
			2004 Budget:	\$15,000
			Expense to Date:	\$15,000
			Frequency of Reviews:	3 Years
			Next Review Date:	March 2006
	Status/ Comments:	The NPCC Area control rooms have implemented the software package incorporating the Solar Terrestrial Dispatch notification/alert process.		
	NPCC Contact:	Jerry Mosier		

Item	Name	Assignment		
CO-10	Operational Tools Working Group	The Operational Tools Working Group (CO-10) is responsible for taking a lead role in the development of NPCC and NERC operational tools (e.g. electronic tagging, the NERC Interchange Distribution Calculator and electronic scheduling), including hardware, software and integrated systems. The Operational Tools Working Group will define the need for operational tools, evaluate the cost benefits of operational tools, coordinate their implementation within NPCC and coordinate common training in the use of operational tools.	2004 Budget:	\$15,000
			Expense to Date:	\$0
			Completion Date:	December 2004
	Status/ Comments:	CO-10 has coordinated development of OSS Facilitated Transaction Checkout among NPCC Areas and PJM. Meetings were held to further this process during November and on February 18-19, 2004. Testing by ISO-NE is targeted for April with implementation targeted for summer 2004.		
	NPCC Contact:	Paul Roman		

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Item	Name	Assignment		
LESPWG	Lake Erie Security Process Working Group	The Lake Erie Security Process Working Group was formed to address the charge stemming from the Northeast Power Coordinating Council Security Process Plan. The Lake Erie Security Process has established Lake Erie line loading relief procedures developed by representatives from Ontario Hydro, the New York Power Pool, the Pennsylvania-New Jersey-Maryland Interconnection Association and the Michigan Electric Coordinated Systems.	2004 Budget:	\$15,000
			Expense to Date:	\$0
			Completion Date:	December 2004
	Status/ Comments:	LESPWG has curtailed activities during 2003 and has disbanded. Can be reassembled if new conditions warrant.		
	NPCC Contact:	Paul Roman		

Item	Name	Assignment		
ATCWG	Available Transfer Capability Working Group	Review the procedures developed by the Regions (or sub-regions) for determining ATC to ensure that the procedures are in concert with the ATC Principles in NERC's June 1996 Available Transfer Capability Definitions and Determination report.	2004 Budget:	\$5,000
			Expense to Date:	\$0
			Completion Date:	December 2004
	Status/ Comments:	The group has submitted a remediation plan to NERC in response to a level 1 non-compliance assessment in the pilot Phase II B Compliance Program and has developed the NPCC Regional Data Posting System which is a web page initially containing TTC-ATC Area information. The group has also drafted a set of comments to Phase IIB of the NERC Compliance Program. The group is also coordinating with the Mid-West System Operator to pull in TCC-ATC information to the NPCC web-site.		
	NPCC Contact:	Guy Zito		

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Item	Name	Assignment		
DCWG	Data Collection Working Group	Serve as the electric utility industry's coordinator with the Department of Energy (DOE) and the Energy Information Administration (EIA) in submitting yearly data and in negotiating the requirements for data submission to the EIA.	2004 Budget:	\$5,000
			Expense to Date:	\$3,025
			Completion Date:	December 2004
	Status/ Comments:	A first quarter 2004 meeting will be held in April 2004 in Washington DC to finalize the 2004 data submission for 2003 and discuss the 2004 data collection efforts. An EIA-IDC (Internet Data Collection) system is in place to collect Form 860 generator data. Currently under development is an EIA Form 411 data collection system that will also be internet based.		
	NPCC Contact:	Guy Zito		

Item	Name	Assignment		
Inter-ISO	Inter-ISO Working Group	The Inter-ISO Working Group was formed to address Inter-Regional planning and Inter-Area issues of projects that have "cross border" impacts while providing an open stakeholder forum and committee structure to allow market input.	2004 Budget:	\$5,000
			Expense to Date:	\$0
			Completion Date:	December 2004
	Status/ Comments:	The Working Group has developed a Northeastern Planning Protocol document that outlines how Inter-Regional planning will be done. All NPCC Areas and PJM are involved with the effort. The document is currently in its final stage of review and will be presented to the Area's stakeholders for final input before formal execution. NPCC has developed and is maintaining a website for the effort.		
	NPCC Contact:	Guy Zito		

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Item	Name	Assignment		
IRCWG	Inter-Control Area Restoration Coordination Working Group	IRCWG addresses the issue of ensuring appropriate operation of key system restoration facilities and their critical components.	2004 Budget:	\$10,000
			Expense to Date:	\$1,300
			Completion Date:	December 2004
	Status/ Comments:	The IRCWG is assisting CMAS in assessing the results of the 2003 trial program for compliance to the restoration provisions of the newly revised NPCC Document A-03. Also developing a report summarizing the restoration experiences following the power system collapse August 14 th together with lessons learned and recommendations for follow-up.		
	NPCC Contact:	Jerry Mosier		

Item	Name	Assignment		
CO-12	Summer Security Assessment Working Group	Review the overall reliability of the generation and transmission system in the NPCC Region for the 2004 Summer.	2004 Budget:	\$15,000
			Expense to Date:	\$0
			Completion Date:	May 2004
	Status/ Comments:	The Summer Security Assessment Working Group has become a permanent Working Group, named CO-12. Work started in late January on the 2004 Summer Assessment Study. The 2004 Summer Assessment will include a section on how the blackout recommendations are being addressed. A presentation on the preliminary results will be provided to the RCC on March 18 th .		
	NPCC Contact:	Paul Roman		

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Item	Name	Assignment		
CP- 8	Working Group on Review of Resource and Transmission Adequacy	Review the overall reliability of the NPCC Areas and perform pre-seasonal resource adequacy assessments.	2004 Budget:	\$60,000
			Expense to Date:	\$3,500
			Completion Date:	December 2004
	Status/ Comments:	The Working Group is in the process of completing the Summer 2004 Multi-Area Probabilistic Reliability Assessment and the Tie Benefits Study. Interim Reviews of Resource Adequacy have been completed for the Maritimes, New York, and Quebec Areas, and have been submitted for approval at the March RCC meeting.		
	NPCC Contact:	Phil Fedora		

Item	Name	Assignment		
CP- 2004	Summer 2004 Multi-Area Probabilistic Reliability Assessment	Assess NPCC Area reliability for the year 2004 by estimating the annual Loss of Load Expectation (LOLE) and projected use of Area Operating Procedures designed to mitigate resource shortages for the summer (May through September) period.	2004 Budget:	\$55,000
			Expense to Date:	\$5,175
			Completion Date:	May 2004
	Status/ Comments:	The scope and schedule for the Summer 2004 Multi-Area Probabilistic Reliability Assessment was approved at the November RCC meeting. Study by the CP-8 Working Group is underway. presentation on the preliminary results will be provided to the RCC on March 18 th .		
	NPCC Contact:	Phil Fedora		

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Item	Name	Assignment		
CP - TIE	Review of Interconnection Assistance Reliability Benefits	On a consistent basis, estimate the amount of interconnection assistance available to the NPCC Areas for today's system and for the near term (2006).	2004 Budget:	\$25,000
			Expense to Date:	\$17,540
			Completion Date:	June 2004
	Status/ Comments:	Preliminary results discussed at the December TFCP meeting. Draft report and scenarios needed to complete the study were discussed at the January and February TFCP meetings. The study is being conducted by the CP-8 Working Group and is on schedule.		
	NPCC Contact:	Phil Fedora		

Item	Name	Assignment		
CP-9	Review of NERC Reliability Standards Working Group	Initially review the Phase I NERC Planning Standards that have been placed into final NERC due process. Recommend changes to those NERC Planning Standards that are scheduled for implementation in latter phases of the NERC Compliance Program. Review the Standards Authorization Requests and Reliability Standards as well as participate in the NERC process. Educate and inform the membership of developments.	2004 Budget:	\$25,000
			Expense to Date:	\$1,550
			Completion Date:	December 2004
	Status/ Comments:	The CP-9 Working Group is focusing on the review of NERC Planning Standards and new NERC Reliability Standards (as they are developed) and is developing recommendations for the membership on ballots as they transpire.		
	NPCC Contact:	Guy Zito		

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Item	Name	Assignment		
CP-10	Collaborative Planning Initiative	The CP10 Working Group is tasked with determination of the effects of proposed new generation and transmission in the year 2006. The group will initially be studying the effects the additions have on existing bottlenecks as well as any new ones. The study will then focus on various scenarios as defined by working group members to determine the impacts on those bottlenecks identified. Possible future study this group will undertake could involve proposing solutions to the problem bottlenecks.	2004 Budget:	\$10,000
			Expense to Date:	\$0
			Completion Date:	December 2004
	Status/ Comments:	Phase 1 of the study was approved by the RCC in March identifying approximately 50 transmission bottlenecks for a 2006 study year. Phase 2 of the study is currently underway which will prioritize those bottlenecks found in Phase 1 and is scheduled to be completed by December 2004.		
	NPCC Contact:	Guy Zito		

Item	Name	Assignment		
RPF	Regional Planning Forum	The objective of the RPF is to explore innovative approaches to enhancing the capabilities of the transmission grid from a Wide-Area, trans-regional outlook.	2004 Budget	\$50,000
			Expense to Date:	\$0
			Completion Date:	December 2004
	Status/ Comments:	A presentation illustrating the voltage profile resulting from the publicly available Blackout 2003 sequence of events was presented at the NPCC Executive Committee's September meeting.		
	NPCC Contact:	Phil Fedora		

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Item	Name	Assignment		
CP-11	<i>NPCC Basic Criteria For Design and Operation Of Interconnected Power Systems Review Working Group</i>	This Working Group is charged with the revision of the NPCC Basic Design Criteria Document A-02 and the NPCC Glossary of Terms Document A-07. The review is currently underway and scheduled for submittal to the RCC for approval at their March 2004 meeting.	2004 Budget	\$10,000
			Expense to Date:	\$450
			Completion Date:	December 2004
	Status/ Comments:	The revised A-2 criteria was posted for the first time in 2003 and comments considered. The document was posted for a second open comment period through March 10, 2003 and was discussed at the July RCC meeting. The document is scheduled for approval at the March 2004 RCC meeting.		
	NPCC Contact:	Stan Kopman		

Item	Name	Assignment		
JGWG	Joint Glossary Working Group	Maintain the NPCC Glossary of Terms (Document A-7) and to expand the Glossary to include new terms as necessary.	2004 Budget:	\$5,000
			Expense to Date:	\$0
			Next Review Date:	December 2004
	Status/ Comments:	The CP-11 Working Group is currently revising the document and will be posting it in the NPCC Open Process For review by year's end.		
	NPCC Contact:	Guy Zito		

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Item	Name	Assignment		
SS-37	Base Case Development Working Group	On an annual basis, develop a library of solved load flow cases and associated dynamic data.	2004 Budget:	\$10,000
			Expense to Date:	\$0
			Completion Date:	December 2004
	Status/ Comments:	Year 2003 Base Case Development is complete and Year 2004 development effort is currently underway.		
	NPCC Contact:	Donal Kidney		

Item	Name	Assignment		
SS-38	Inter-Area Dynamic Analysis Working Group	Assigned to analyze dynamic phenomena, which may affect interconnected system reliability, especially in the area of low frequency oscillations.	2004 Budget:	\$20,000
			Expense to Date:	\$5,200
			Completion Date:	December 2004
	Status/ Comments:	A final UFLS report was completed and was presented to the RCC in March 2003. The implementation of the recommendations from the report will be coordinated by the TFCP; a status report was given at the July RCC meeting.		
	NPCC Contact:	Donal Kidney		

Item	Name	Assignment		
TRS	Transmission Reliability Study	Evaluate the need to perform an overall assessment to evaluate the thermal, and dynamic performance of the NPCC Region. If necessary perform this assessment including the calculation of Inter-Area transfer capabilities and Extreme contingency performance.	Latest Version:	May 2002
			2004 Budget:	\$50,000
			Frequency of Reviews:	3 years
			Completion Date:	May 2005
			Expense to Date:	\$0
	Status/ Comments:	The SS-38 Working Group has conducted the 2001 Overall Transmission Reliability Study. The Study simulates contingencies in each of the NPCC Areas plus PJM to determine the overall robustness of the system. The report was approved by the RCC at their July 2002 Meeting		
	NPCC Contact:	Donal Kidney		

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Item	Name	Assignment		
ISTWG	Infrastructure Security and Technology Working Group	Periodic workshops to address timely issues and update member system personnel associated with the provision of on-line computer systems for operation of the power system.	2004 Budget:	\$5,000
			Expense to Date:	\$0
			Last Workshop:	May 16, 2002
	Status/ Comments:	The TFIST is currently reviewing the need for a workshop this year.		
	NPCC Contact:	Frantz Roc		

Item	Name	Assignment		
MEN	MAAC-ECAR-NPCC Working Group	The MEN Operating Studies Working Group, under the direction of the MEN Study Committee, conducts appraisals of the MAAC-ECAR-NPCC (MEN) interconnected systems for expected summer and winter periods.	2004 Budget:	\$10,000
			Expense to Date:	\$0
			Completion Date:	December 2004
	Status/ Comments:	The MEN/VEM base case had been finalized during early February. This case is being used for several Other inter-regional studies (VEM, ECAR, 2004 MISO Coordinated Assessment, etc.) The outage, monitored lines and transfer participation files have been assembled. NPCC is conducting the testing for 2004 Summer.		
	NPCC Contact:	Donal Kidney/Paul Roman		

Item	Name	Assignment		
MMWG	Multiregional Modeling Working Group	Develop a library of solved load flow and dynamic simulation models for use by the Regions and their member systems in planning and evaluating future systems and current operating conditions.	2004 Budget:	\$5,000
			Expense to Date:	\$0
			Completion Date:	December 2004
	Status/ Comments:	The MMWG was directed to review and update the existing data release policies for power flow and dynamic data and models. In 2004, MMWG will assemble twelve load flow models that constitute the 2005 base case library and five dynamics library cases. The NPCC SS-37 Working Group on Base Case. Development is currently on schedule.		
	NPCC Contact:	Donal Kidney		

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Item	Name	Assignment		
NERC-ISN	Interregional Security Network (ISN)	The ISN allows for the exchange of security data between Security Coordination Centers.	2004 Budget:	\$120,000
			Expense to Date:	\$17,807
			Completion Date:	December 2004
	Status/ Comments:	Expense represents monthly NERC network charge to provide ISN services for ISO New England, the New York ISO, the IMO and TransEnergie.		
	NPCC Contact:	Frantz Roc		