## UNITED STATES OF AMERICA BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION

NORTH AMERICAN ELECTRIC	)		
RELIABILITY CORPORATION	)	Docket No.	RR07-14-000

# COMPLIANCE FILING OF THE NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION IN RESPONSE TO FERC ORDER ON FILING OF RELIABILITY ENHANCEMENT PROGRAMS

Rick Sergel
President and Chief Executive Officer
David N. Cook
Vice President and General Counsel
North American Electric Reliability
Corporation
116-390 Village Boulevard
Princeton, NJ 08540-5721
(609) 452-8060
(609) 452-9550 — facsimile
david.cook@nerc.net

Rebecca J. Michael
Assistant General Counsel
North American Electric Reliability
Corporation
1120 G Street, N.W., Suite 990
Washington, D.C. 20005-3801
(202) 393-3998
(202) 393-3955 — facsimile
rebecca.michael@nerc.net

#### TABLE OF CONTENTS

I.	INTR	NTRODUCTION			
II.	NOTI	TICE AND COMMUNICATIONS			
III.		RESPONSE TO FERC ORDER ON FILING OF RELIABILITY ENHANCEMENT PROGRAMS			
	A.	Overv	iew	3	
	B.	Descri	ption of Specific Programs and Initiatives Being Implemented by NERC	5	
		1.	Development of NERC's Five-Year Strategic Plan	5	
		2.	Critical Infrastructure Protection	6	
		3.	Continued Efforts to Enhance Reliability Metrics and Benchmarking Program	8	
		4.	Reliability Assessment Improvement Program	12	
		5.	Establishing New Reliability Databases for Availability Performance of Transmission Facilities and Demand Response Programs	14	
		6.	Definition of Adequate Level of Reliability	16	
		7.	Development of a Reliability Concepts Document	16	
		8.	Development and Implementation of the NERC Alerts Program	17	
		9.	Improving Reliability Tools and Support Services	17	
IV.	CONO	CLUSIC	)N	20	

#### I. INTRODUCTION

The North American Electric Reliability Corporation (NERC) submits this compliance filing in response to the Order on Filing of Reliability Enhancement Programs, issued by the Federal Energy Regulatory Commission (FERC or the Commission) on November 2, 2007. In this order, the Commission approved NERC's uncontested filing of July 20, 2007, pursuant to the relevant authority delegated to the Director, Office of Electric Reliability under 18 C.F.R. § 375.314, subject to the condition that NERC files, by the second anniversary of its certification as the electric reliability organization (ERO), a further report on the status and array of its reliability enhancement programs.

In this filing, NERC describes several reliability enhancement programs and activities initiated or expanded in the last year to improve the reliability of the bulk power system. In addition to these specific programs, NERC and the Regional Entities continue to expend a significant amount of effort on further improving the efficiency and effectiveness of the standards development, compliance monitoring and enforcement, and reliability assessment programs. Reports on these activities have been and will continue to be the subject of other filings with the Commission. As such, this filing will concentrate on other NERC reliability enhancement programs and activities.

NERC is keenly aware of programs and activities of other organizations, such as the Nuclear Regulatory Commission (NRC), Institute of Nuclear Power Operations (INPO), and the Financial Industry Regulatory Authority (FINRA), and is interested in incorporating some of the

<sup>&</sup>lt;sup>1</sup>Letter Order on Filing of Reliability Enhancement Programs, Joseph H. McClelland to Rebecca J. Michael, dated November 2, 2007.

elements of these programs into NERC as it seeks to further improve its reliability enhancement programs and activities. These include: the "Best Practices" program of INPO, the "Significance Determination Process" and "Action Matrix" that are part of the new Reactor Oversight Process of the NRC, and the "Compliance Tools" program of FINRA (formerly National Association of Securities Dealers). However, as indicated in its filing of July 20, 2007, NERC is not in a position during this period of ERO start up and transition to propose the design and implementation of a full array of specific programs for NERC comparable to the specific programs of the nuclear power industry and others as discussed in Order No. 672. Nonetheless, some of the reliability enhancement programs and initiatives NERC is implementing take into account some features of these programs where possible. NERC will continue to be informed by these programs and strive to incorporate the most appropriate elements of them into its own reliability enhancement programs.

#### II. NOTICES AND COMMUNICATIONS

Notices and communications with respect to this filing may be addressed to:

Rick Sergel
President and Chief Executive Officer
David N. Cook\*
Vice President and General Counsel
North American Electric Reliability
Corporation
116-390 Village Boulevard
Princeton, NJ 08540-5721
(609) 452-8060
(609) 452-9550 — facsimile
david.cook@nerc.net

Rebecca J. Michael\*
Assistant General Counsel
North American Electric Reliability
Corporation
1120 G Street, N.W., Suite 990
Washington, D.C. 20005-3801
(202) 393-3998
(202) 393-3955 — facsimile
rebecca.michael@nerc.net

<sup>\*</sup>Persons to be included on the Commission's official service list.

### III. RESPONSE TO FERC ORDER ON FILING OF RELIABILITY ENHANCEMENT PROGRAMS

#### A. Overview

In its letter order dated November 2, 2007, the Commission stated:

NERC's uncontested filing is approved pursuant to the relevant authority delegated to the Director, Office of Electric Reliability under 18 C.F.R. § 375.314, subject to the condition that NERC shall file by the second anniversary of its certification as the ERO a further report on the status and array of its reliability enhancement programs. This further compliance filing is due on or before July 20, 2008.

The Commission correctly recognized in paragraph 468 of Order No. 672 that the most important initial priority was "to first establish the ERO." As the Commission is well aware, in late 2006 it approved NERC's initial business plan and ERO budget (for 2007), and early in 2007 it approved NERC's initial proposed set of reliability standards to be mandatory and enforceable, as well as NERC's Uniform Compliance Monitoring and Enforcement Program (CMEP), NERC's *Pro Forma* Delegation Agreement, and the individual delegation agreements between NERC and the eight Regional Entities. In late 2007, the Commission conditionally accepted the 2008 NERC Business Plan and Budget. During late 2006 and through the present, NERC and the Regional Entities have devoted considerable attention to developing new and revised reliability standards, and identifying and registering users, owners and operators of the bulk power system in the United States that will be responsible for complying with requirements

\_

<sup>&</sup>lt;sup>2</sup> Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards, FERC Stats. & Regs. Regulations Preambles ¶ 31,204 at P 468 (2006) (Order No. 672).

<sup>&</sup>lt;sup>3</sup>See Order Conditionally Accepting 2007 Business Plan and Budget of the North American Electric Reliability Corporation Approving Assessments to Fund Budgets and Ordering Compliance Filings, 117 FERC ¶ 61,091 (2006); Mandatory Reliability Standards for the Bulk-Power System, Order No. 693, FERC Stats. & Regs. ¶ 31,242 (2007); Order Accepting ERO Compliance Filing, Accepting ERO/Regional Entity Delegation Agreements, and Accepting Regional Entity 2007 Business Plans, 119 FERC ¶ 61,060 (2007).

<sup>&</sup>lt;sup>4</sup> Order Conditionally Accepting 2008 Business Plan and Budget of the North American Electric Reliability Corporation and Ordering Compliance Filings, 121 FERC ¶ 61,057 (2008).

of the mandatory reliability standards approved by the Commission. Additionally, NERC and the Regional Entities initiated the CMEP for mandatory and enforceable reliability standards in early June 2007, with a focus during the ensuing six months, as FERC has suggested, on serious violations of reliability standards. In early June 2008, NERC filed with the Commission the first notices of penalty associated with confirmed violations of its mandatory reliability standards, with the expectation of additional notices to follow.

In view of the resources and attention required to complete these activities, design and implementation of programs for users, owners and operators of the North American bulk power system, comparable to those developed in the nuclear power industry by INPO and NRC and in the securities industry by FINRA, it would be an impractical undertaking for NERC and the industry at a time NERC, the Regional Entities, and users, owners and operators are realizing the full magnitude of start up and implementation of the current NERC programs.

NERC has, however, implemented, or is in the process of implementing, a number of programs and initiatives that NERC believes can contribute significantly to improving and enhancing the reliability of the bulk power system.<sup>5</sup> These programs and initiatives, which are described in the balance of this filing, include the following:

- Development of NERC's New Five-Year Strategic Plan
- Critical Infrastructure Protection
- Continued Efforts to Enhance the Reliability Metrics and Benchmarking Program
- Reliability Assessment Improvement Program

-

<sup>&</sup>lt;sup>5</sup> NERC has also made, or in the process of making, a number of process improvements to its standards and compliance programs, which will also contribute to enhanced reliability. Because these improvements are or will be the subject of other filings with the Commission, they are not restated here.

- Establishing New Reliability Databases for Availability Performance of Transmission Facilities and Demand Response Programs
- Definition of Adequate Level of Reliability
- Development of a Reliability Concepts Document
- Development and Implementation of the NERC Alerts Program
- Improving Reliability Tools and Support Services

The specific goals and objectives for these programs and initiatives described in the remainder of this filing will be embodied in the proposed 2009 NERC Business Plan and Budget, which NERC is scheduled to submit to the Commission on August 22, 2008. The 2009 NERC Business Plan and Budget will contain a more detailed description of each of the NERC programs and initiatives and how they interrelate and contribute to achieving NERC's mission of improving reliability.

#### B. Description of Specific Programs and Initiatives Being Implemented by NERC

#### 1. Development of NERC's New Five-Year Strategic Plan

In November 2007, the NERC Board of Trustees approved a new five-year strategic plan<sup>6</sup> to provide strategic direction for the corporation's activities in 2008 and beyond to achieve its mission of ensuring the bulk power system in North America is reliable. Successful implementation of the strategic directions established in the plan, along with the subsequent program area work plans and annual business plans, will enable NERC to achieve its mission and vision in an effective and efficient manner.

5

<sup>&</sup>lt;sup>6</sup> The NERC Strategic Plan 2008–2013 at http://www.nerc.com/files/Strategic-PlanWebsite.pdf

NERC will face new and changing demands within the 2008–2013 time frame. As such, NERC will continue to be flexible in implementing the steps necessary to achieve its mission and vision. NERC expects the strategic statements included in the plan to be reviewed, revised and supplemented on a basis no less frequent than every other year.

In addition to the strategic plan, NERC identified its top ten goals for 2008.<sup>7</sup> These goals address essentially all of NERC's program areas and are designed to focus attention on those activities that will help NERC achieve its reliability mission.

#### 2. Critical Infrastructure Protection

Critical infrastructure protection for the electricity sector consists of a collection of strategic and tactical initiatives aimed at improving the overall resiliency of the bulk power system in North America to threats and vulnerabilities. These threats include physical and cyber security, particularly involving Supervisory Control And Data Acquisition (SCADA) and process control systems; cross-sector dependencies and their implications to planning and operations; and emergency response and business continuity planning, including training and exercises. NERC coordinates, collaborates and facilitates many of these initiatives on behalf of the electricity sector.

As an international ERO, NERC must be at the forefront with respect to critical infrastructure protection issues and ensure that its efforts are complementary to the efforts of government agencies and the industry. NERC and the industry share a mutual goal to ensure that threats to the reliability of the bulk power system, especially cyber security threats, are clearly

6

\_

<sup>&</sup>lt;sup>7</sup> Top Ten NERC Goals for 2008 at http://www.nerc.com/files/Top-Ten-Goals-2008.pdf

understood and that there are no gaps or confusion with respect to responsibilities for mitigating those threats.

Recognizing the critical differences associated with cyber security threats to bulk power system reliability, NERC will be consolidating responsibility for coordination of cyber security matters across all NERC activities into a single responsibility area. NERC will staff a senior executive to be the Chief Security Officer who will serve as a single point of contact for the industry, the Electricity Sector Steering Group (ESSG) and government stakeholders seeking to communicate with NERC on cyber and other infrastructure security matters.

Among the Chief Security Officer's initial responsibilities will be:

- Assuring the Rules of Procedure for all NERC programs are implemented in a timely and effectively manner with respect to critical infrastructure protection;
- Evaluating and recommending any changes to the Rules of Procedure necessary to achieve the objectives of the Critical Infrastructure Protection program;
- Assuring coordination between NERC and the respective government agencies with respect to all critical infrastructure protection matters, especially where confidentiality is an issue;
- With assistance of the Regional Entities, initiate an assessment with metrics and recommendations of the preparedness of the users, owners and operators on the NERC compliance registry to address cyber security threats; and
- Representing NERC in the Partnership for Critical Infrastructure Security.

## 3. Continued Efforts to Enhance Reliability Metrics and Benchmarking Program

In order for NERC's programs to be successful, it is important to track their influence on the reliability of the bulk power system. By defining various metrics and indices, it is possible to use amassed historical data to track the success of various initiatives and develop leading indicators and root causes of unreliable system performance based on past events.

As part of its continued efforts to enhance the Reliability Metrics and Benchmarking Program, NERC developed a draft plan for an advanced system for establishing those metrics. The objectives of this plan are to develop guidelines for acceptable metrics, assess available metrics, maintain a performance metrics "dashboard" on NERC's Web site and develop from analysis of these metrics appropriate reliability performance benchmarks.

The plan calls for the development and use of three major indices as reliability performance metrics used to judge the relative performance of the bulk power system. The three indices are:

- **Reliability Performance Gap (RPG)**: designed to measure how far the system is from expected performance under contingencies (dynamic conditions).
- Adequacy Gap (AG): designed to measure the capacity and energy shortage from expected adequacy level under steady state conditions.
- Violation Index (VI): designed to measure the reliability improvement from compliance with NERC Reliability Standards.

These three indices are intended to capture and represent many complex reliability parameters into easy to understand reliability performance metrics. They provide clarity that

reliability is NERC's strength and focus. NERC measures its success through the relative reliability improvements encapsulated in these metrics.

<u>Reliability Performance Gap Events</u> are the disturbances that significantly affect the integrity of interconnected system operations. They are divided into five categories to take into account their different system impact.

#### Category 1 — An event results in any or in combination of the following actions

- The loss of a bulk power transmission component beyond recognized criteria, *i.e.*, single-phase line-to-ground fault with delayed clearing, line tripping due to growing trees, *etc.*
- A frequency below the Low Frequency Trigger Limit (FTL) for more than five minutes
- A frequency above the High FTL for more than five minutes
- An inter-area oscillation

#### Category 2 — An event results in any or in combination of the following actions

- The loss of multiple bulk power transmission components
- Special Protection System (SPS) or Remedial Action Scheme (RAS) misoperation
- The loss of generation (between 1,000 MW and 2,000 MW in the Eastern Interconnection or Western Interconnection and between 500 MW and 1,000 MW in the ERCOT Interconnection)
- The loss of an entire generation station or five or more generators
- The loss of an entire switching station (all lines, 100 kV or above)
- The loss of a dc converter station
- The occurrence of an islanding (weakly tied to the interconnection in steady state)

#### Category 3 — An event results in any or in combination of the following actions

- The loss of generation (2,000 MW or more in the Eastern Interconnection or Western Interconnection and 1,000 MW or more in the ERCOT Interconnection)
- The loss of load (less than 1,000 MW)
- Under Frequency Load Shedding (UFLS) or Under Voltage Load Shedding (UVLS)
   operation

#### Category 4 — An event results in any or in combination of the following actions

- The occurrence of an interconnected system separation or islanding
- The loss of load (1,000 MW to 9,999 MW)

#### Category 5 — An event results in any or in combination of the following actions

- The occurrence of a blackout
- The loss of load (10,000 MW or more)

<u>Adequacy Gap Events</u> are divided into three main categories, exemplified in the three categories based on the Standard EOP-002-0 (Capacity and Energy Emergencies):

#### Category A1: All available resources in use

- Required operating reserves cannot be sustained
- Non-firm wholesale energy sales have been curtailed

#### Category A2: Load management procedures in effect

- Public appeals to reduce demand
- Voltage reduction
- Interruption of non-firm end-use loads in accordance with applicable contracts
- Demand-side management
- Utility load conservation measures

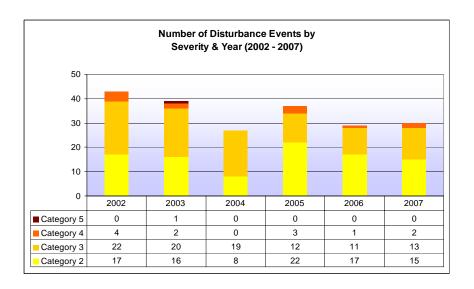
#### **Category A3: Firm load interruption imminent or in progress**

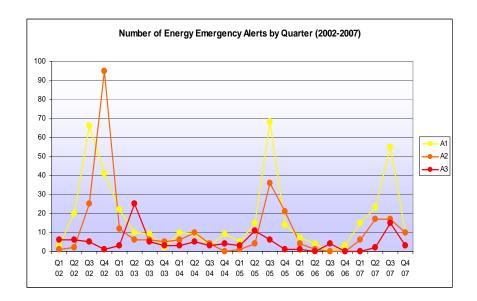
Violation Index (VI) is designed to measure improvement in compliance with standards. The VI for each entity is weighted based on each violation's Violation Risk Factor (VRF) and Violation Severity Level (VSL). A risk factor and severity level weighted-violation average can determine the change in reliability levels due to confirmed standard requirement violations. The weighting values can be derived by applying similar ratios developed in the NERC Sanction Guidelines<sup>8</sup> to assess the potential consequences of a particular violation. Violations of a higher risk factor requirement have a higher weighting value in the index than violations of lower risk factor requirements. The index decreases if the compliance improvement is achieved over a trending period.

Sample graphics for the first two indices are shown below.

11

<sup>&</sup>lt;sup>8</sup> NERC Sanction Guidelines at http://www.nerc.com/files/Appendix4B\_Sanctions\_Guidelines\_Effective\_20080115.pdf





#### 4. Reliability Assessment Improvement Program

At its March 12–13, 2008 meeting, the NERC Planning Committee approved a plan to improve the seasonal and long-term reliability assessments. This plan, focused on creating a platform from which the industry can address reliability considerations, increases the level of granularity, transparency and comprehensiveness of assessments. Enhancements include:

• Risk assessment for Emerging Issues and determination of Scenarios

- Risk Assessment and probability analysis for the Long-Term Reliability Assessment
- Additional and improved metrics for long-term assessment
- Development and maintenance of a NERC-wide reliability assessment handbook
- Addition of on-peak and off-peak transmission and capacity reliability assessment
- Generation/fuel interdependency

In addition, to further support improvements to its seasonal and long-term reliability assessments NERC has initiated efforts to study and better understand the impacts on the bulk power system reliability of integration of variable generation and demand response resources.

The NERC Planning Committee formed two task forces to address these issues whose objectives and work products are described briefly below. NERC included a number of graphics in its 2008 Summer Reliability Assessment<sup>9</sup> to focus attention on these issues.

<u>Variable Generation</u> — Prepare a concepts document that includes the philosophical and technical considerations for integrating variable resources into the interconnection, and specific recommendations for practices and requirements, including reliability standards, that cover the planning, operations planning, and real-time operating timeframes.

<u>Demand Response</u> — Identify how the Demand-Response (DR) resource data will be used by NERC; agree upon a set of DR definitions; agree upon the metrics NERC will calculate to satisfy its objectives; agree upon the data to support the metrics; design a data collection system; and begin data collection.

\_

<sup>&</sup>lt;sup>9</sup> 2008 Summer Reliability Assessment at http://www.nerc.com/files/summer2008.pdf

To further improve consistency and increase the granularity/transparency of how regional resource projections are represented in NERC assessment reports, the Planning Committee approved new categories for capacity resources and capacity purchases and sales to replace the categories of "committed" and "uncommitted" resource designations used in previous seasonal and long-term assessments.

## 5. Establishing New Reliability Databases for Availability Performance of Transmission Facilities and Demand Response Programs

Since becoming the ERO, NERC has taken on the role of being an independent source of reliability performance information, thereby fulfilling one of the recommendations in the April 2004 U.S.—Canada Power System Outage Task Force Report on the August 14, 2003 blackout.

NERC is well along in the development and implementation of a Transmission Availability Data System (TADS) and is in the early stages of development of a Demand-Response Availability Data System (DADS).

<u>TADS</u> — NERC believes the greatest use of data collected in the newly created TADS will be for outage cause analysis and outage event analysis. Event analysis will aid in the determination of credible contingencies and will result in better understanding to improve planning and operations. Ultimately, these improvements should result in improved transmission system performance.

Specific objectives for the TADS program in 2009 include:

 Maintain and expand the TADS and report on trends in transmission equipment performance.

- Subject to the Board of Trustees approval in 2008, expand the system to include historic Planned Outages and related metrics required by the TADS Task Force.
- Eliminate the need for duplicate Transmission Owner reporting via EIA-411.
- Export data from TADS to fulfill the EIA-411 Schedule 7 requirements.
- Evaluate the feasibility of expanding TADS to cross reference TADS and GADS automatic outage events. (Events which automatically outage both transmission circuits and generators should be integrated and such trends tracked via TADS.)

<u>DADS</u> — Demand-response programs are important ingredients in an overall portfolio of resources required to meet the increasing demands for electricity in North America. In order for NERC to understand the benefits of demand response and its impact on reliability, we must measure how well it performs and develop industry confidence.

The goal of the DADS is to collect demand-response event information to measure the ongoing influence of demand response on reliability and provide a basis for projecting both dispatchable and non-dispatchable (price-driven) demand response towards planning (demand reduction) and operational reliability. A task force of the NERC Planning Committee (PC) is developing a demand-response data collection proposal, which would provide a basis for counting and validating demand-response resources toward meeting operational and resource adequacy requirements. A draft data collection proposal is scheduled to be submitted to the NERC PC for discussion and decision at its September 2008 meeting.

#### 6. Definition of Adequate Level of Reliability

The Commission directed NERC to consider and propose methods for ensuring that reliability standards provide for an adequate level of reliability and for defining "an adequate level of reliability" in its "Order Certifying North American Electric Reliability Corporation as the Electric Reliability Organization and Ordering Compliance Filing." In response to that directive, NERC developed a definition of "Characteristics of a System With an Adequate Level of Reliability" and in May 2008 submitted that definition as an informational filing to the Commission. 11

NERC expects to use the definition when considering gaps or shortcomings that might exist in the set of currently effective reliability standards and as a guide to whether or not the reliability standards, taken as a whole, promote "an adequate level of reliability."

#### 7. Development of a Reliability Concepts Document

In December 2007, the NERC Planning and Operating Committees completed work on a Reliability Concepts document<sup>12</sup> that sets forth six concepts related to reliability of the bulk power system and then discusses how each contributes to the planning and operating criteria that form the basis of reliability standards. These concepts are: managing risk; credible contingencies; acceptable performance; boundary conditions; system operating limits; and timeframes.

<sup>&</sup>lt;sup>10</sup> Order Certifying North American Electric Reliability Corporation as the Electric Reliability Organization and Ordering Compliance Filing, 116 FERC ¶ 61,062 at P 240 (July 20, 2006).

Definition of "Adequate Level of Reliability" (May 5, 2008).

<sup>&</sup>lt;sup>12</sup> Reliability Concepts at http://www.nerc.com/files/concepts\_v1.0.2.pdf

#### 8. Development and Implementation of the NERC Alerts Program

In the normal course of operations, NERC disseminates the results of its events analysis findings, lessons learned, and other analysis and information gathering to the industry. When NERC determines it is necessary to place the industry or segments of the industry on formal notice of its findings, analyses, and recommendations, NERC will provide such notification in the form of specific operations or equipment "alerts" that are categorized as advisories, recommendations, or essential actions. To date, NERC has issued seven advisories and one recommendation.

The NERC Alerts Program, while in its infancy, is not unlike the Generic Communications Program of the NRC through which it communicates information to its licensees and interested stakeholders through several types of informational documents.

#### 9. Improving Reliability Tools and Support Services

To help achieve its reliability mission, NERC provides tools and other support services for the use and benefit of the bulk power system operators including reliability coordinators.

These tools provide situation awareness and rapid communications, help implement transmission loading relief procedures, and meet requirements for same-time information to market participants and others. NERC also assesses new and emerging technologies and, as appropriate, encourages and facilitates their development into tools that enhance the reliability of the bulk power system.

NASPI Project — One of the "tools" projects that has very high potential for enhancing the reliability of the bulk power system is the North American SynchroPhasor Initiative (NASPI) project.<sup>13</sup> NERC is:

- Continuing to fund the contracted professional project manager;
- Preparing annual business plans for NASPI with critical milestones and funding requirements;
- Developing regulatory support and approval for NASPI at provincial, state, and federal levels;
- Resolving industry concerns about data availability, disclosure, and confidentiality;
- Developing and implementing recommendations for NERC's on-going role in
   NASPI over the mid- and long-term;
- Ensuring the successful installation of phasor measurement units at all key
  locations in the North American interconnections to provide optimal coverage and
  wide-area visibility;
- Contracting with Tennessee Valley Authority (TVA) to expand use of its existing super data concentrator to collect data from new phasor measurement units;
- Identifying up to seven locations in North America to house additional super data concentrators to improve data collection performance, reliability, and availability;
- Acquiring necessary hardware and software to deploy at least three new sites in
   2009, with the remainder to come on-line in 2010; and

18

<sup>&</sup>lt;sup>13</sup> The latest draft of the 2009 NERC Business Plan and Budget includes sufficient funding to implement all aspects of this project, except for the cost of required communications systems. NERC is in the process of exploring options for outside funding of these expenses. Required expenditures in future years are subject to approval of future business plans and budgets.

 Designing and beginning to construct the telecommunications network required to exchange data between super data concentrators and to deliver information created from that data to control centers.

Real-Time Tools Best Practices — In March 2008, NERC completed work on a report that presented the findings and recommendations of its Real-Time Tools Best Practices Task

Force (RTBPTF) regarding minimum acceptable capabilities and best practices for real-time tools necessary to ensure reliable electric system operation and reliability coordination. The task force's mission was primarily based on the U.S.-Canada Power System Outage Task Force findings that key causes of the August 14, 2003 Northeast blackout included lack of situational awareness and inadequate reliability tools. That report also notes the need for visualization display systems to monitor system reliability. The task force's recommendations, which include a number of proposals for new or revised standards, were developed after an extensive, three-year process of fact finding and analysis supported by the results of the Real-Time Tools Survey, the most comprehensive survey ever conducted of current electric industry practices.

-

<sup>&</sup>lt;sup>14</sup> Real-Time Tools Survey Analysis and Recommendations at http://www.nerc.com/docs/oc/rtbptf/TOC\_ExecSumm\_Intro\_2\_1\_08.pdf

#### IV. <u>CONCLUSION</u>

The North American Electric Reliability Corporation respectfully requests the Commission to accept this filing as compliant with its Order on Filing of Reliability Enhancement Programs, dated November 2, 2007.

Rick Sergel
Rick Sergel
President and Chief Executive Officer
David N. Cook
Vice President and General Counsel
North American Electric Reliability Corporation
116-390 Village Boulevard
Princeton, NJ 08540-5721
(609) 452-8060
(609) 452-9550 — facsimile
david.cook@nerc.net

/s/ Rebecca J. Michael
Rebecca J. Michael
Assistant General Counsel
North American Electric Reliability
Corporation
1120 G Street, N.W., Suite 990
Washington, D.C. 20005-3801
(202) 393-3998

(202) 393-3955 — facsimile

rebecca.michael@nerc.net

Respectfully submitted,

#### **CERTIFICATE OF SERVICE**

I hereby certify that I have served a copy of the foregoing document upon all parties listed on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, D.C. this 21st day of July, 2008.

/s/ Rebecca J. Michael Rebecca J. Michael

Attorney for North American Electric Reliability Corporation