



NORTHEAST POWER COORDINATING COUNCIL, INC.  
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May 11, 2007

**BY HAND DELIVERY**

Honorable Jaclyn A. Brillling  
Secretary  
New York State Public Service Commission  
Three Empire State Plaza  
Albany, New York 12223

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Re: Case No. 05-E-1180 – In the Matter of Northeast Power Coordinating Council, Inc.'s Criteria and Regional Reliability Plan  
SAPA I.D. No. PSC-13-07-00008-P

Dear Secretary Brillling:

On behalf of the Northeast Power Coordinating Council, Inc. ("NPCC Inc."), please find an original and five (5) copies of NPCC Inc.'s comments in the above referenced matter.

If you have any questions regarding this filing, please contact me.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Edward A. Schwerdt', written over a horizontal line.

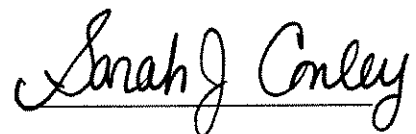
Edward A. Schwerdt  
President and CEO  
NPCC Inc.

Enclosure

**CERTIFICATE OF SERVICE**

Pursuant to the New York Public Service Commission's Rules of Procedure, I hereby certify that I cause an original and five (5) copies of NPCC Inc.'s comments to be served, by hand delivery, upon the Honorable Jaclyn A. Brillling, Secretary to the New York State Public Service Commission, in Case No. 05-E-1180.

Dated this 11<sup>th</sup> day of May, 2007.

A handwritten signature in cursive script that reads "Sarah J. Conley". The signature is written in black ink and is positioned above a thin horizontal line.

**STATE OF NEW YORK  
PUBLIC SERVICE COMMISSION**

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In the Matter of Northeast Power Coordinating )  
Council, Inc.'s Criteria and Regional Reliability Plan )  
\_\_\_\_\_)

Case No. 05-E-1180

**COMMENTS OF NORTHEAST POWER COORDINATING COUNCIL, INC.**

Edward A. Schwerdt  
President and CEO  
NPCC Inc.  
1515 Broadway - 43 Floor  
New York, New York 10036  
Tel: 212-840-1070  
Fax: 212-302-2782

Dated: May 11, 2007

**STATE OF NEW YORK  
PUBLIC SERVICE COMMISSION**

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In the Matter of Northeast Power Coordinating )  
Council, Inc.'s Criteria and Regional Reliability Plan )  
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Case No. 05-E-1180

**COMMENTS OF NORTHEAST POWER COORDINATING COUNCIL, INC.**

The Northeast Power Coordinating Council, Inc. ("NPCC Inc.") respectfully submits these comments on I.D. No. PSC-13-07-00008-P. The proposed rulemaking was published in the March 28, 2007 New York State Register ("SAPA Notice"). The SAPA notice states that the New York Public Service Commission ("Commission") is considering whether to adopt in whole or in part the portions of NPCC Inc.'s criteria and regional reliability plan that are more stringent than North American Electric Reliability Corporation ("NERC") national standards. NPCC Inc. respectfully requests that the Commission consider these comments in support of this proposed action when making its determination in this proceeding.

**I. BACKGROUND**

On August 8, 2005 the Electricity Modernization Act of 2005 ("EPAAct 2005") was signed into law, which for the first time made compliance with electric reliability standards mandatory and enforceable within the United States under Federal statute.<sup>1</sup> The new Section 215 of the Federal Power Act ("FPA") established a process for the promulgation of mandatory reliability standards for the Nation's bulk power system. Standards are to be developed by the Electric Reliability Organization ("ERO") subject to approval by the Federal Energy Regulatory Commission ("FERC"). The ERO is authorized to delegate to Regional Entities the authority to propose and enforce reliability standards.

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<sup>1</sup> Pub. L. No. 109-58, Title XII, Subtitle A, 119 Stat. 594, 941 to be codified at 16 U.S.C. 824o (2000).

On July 20, 2006 NERC was certified by FERC as the ERO<sup>2</sup> and on April 19, 2007 the Northeast Power Coordinating Council: Cross-Border Regional Entity, Inc. (“NPCC CBRE”), the independent affiliate of NPCC Inc., was authorized as the Regional Entity<sup>3</sup> for the Northeastern portion of North America and received delegated authority to propose and enforce NERC reliability standards.

Numerous parties and the FERC have recognized the vital role Regional Reliability Organizations (“RROs”), such as NPCC Inc., play in the development and enforcement of regionally-specific reliability criteria. Moreover, it is acknowledged that the “NERC reliability standards should represent a floor for grid operators and bulk system participants, not a ceiling.”<sup>4</sup>

The State Savings provision of EAct 2005 provides for a State role in the adoption of regionally-specific criteria that enhances reliability beyond the floor set by NERC continent-wide standards:

Nothing in this section shall be construed to pre-empt any authority of the State to take action to ensure the safety, adequacy and security of electric service within that State, as long as such action is not inconsistent with any reliability standard, except that the State of New York may establish rules that result in greater reliability within that State, so long as such action does not result in lesser reliability outside the state than that provided by the reliability standards.<sup>5</sup>

Additionally, EAct 2005 reserves to the State the authority to set and enforce adequacy requirements:

This section does not authorize the ERO or the Commission to order the construction of additional generation or transmission capacity or to set and enforce compliance with standards for adequacy or safety of electric facilities or services.<sup>6</sup>

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<sup>2</sup> *North American Electric Reliability Corp.*, 116 FERC ¶ 61,062 (2006) (“ERO Certifying Order”); order on *reh'g*, 117 FERC ¶ 61,126 (2006).

<sup>3</sup> *North American Electric Reliability Corp.* 119 FERC ¶ 61,060 (2007) (“Delegation Order”)

<sup>4</sup> *Policy Statement on Matters Related to Bulk Power System Reliability*, 107 FERC ¶ 61,052 at P 17 (2004) (“FERC Reliability Policy Statement”).

<sup>5</sup> FPA § 215(i)(3).

<sup>6</sup> FPA § 215(i)(2).

On March 28<sup>th</sup>, 2007, the Commission initiated a Rulemaking to consider whether to approve, in whole or in part, the portions of the Criteria and Regional Reliability Plan of the NPCC Inc. that are more stringent than the continent-wide standards developed by NERC and proposed for enforceability in the U.S. by the FERC.<sup>7</sup> These criteria would further augment the previously adopted reliability rules of the New York State Reliability Council (“NYSRC”).

## **II. DESCRIPTION OF NPCC INC. AND ENFORCEABLE RELIABILITY CRITERIA**

In response to EAct 2005 and the certification of NERC as the ERO, Northeast Power Coordinating Council (“NPCC”) began its restructuring efforts, transferring its Membership interests to a Regional Reliability Organization, in the form of a not-for-profit corporation, NPCC Inc., and established a separate and independent, affiliated, not-for-profit corporation, NPCC CBRE during 2006.

NPCC Inc., as the international RRO for Northeastern North America, and successor to NPCC, provides regional reliability member services and acts as the vehicle through which States and Provinces can fulfill their political mandate to oversee the Northeastern North American electric infrastructure through development, assessment and enforcement of regionally-specific reliability criteria, including those addressing adequacy requirements.

NPCC CBRE serves as the cross-border regional entity for the Northeastern U.S. and Eastern Canada with functions delegated or contracted to it from the ERO, to be

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<sup>7</sup> This Rulemaking was initially opened on October 12, 2005. On February 9, 2006 the Commission issued an Order adopting the NYSRC Reliability Rules but postponed action on the NPCC Criteria because NPCC was at the time in the process of classifying its Criteria, based on the relationship to national and regional standards, into various categories.

backstopped by FERC and Canadian Provincial governmental and/or regulatory authorities.

The geographic area of the NPCC region totals approximately one million square miles and includes New York State, the six New England states, Ontario, Québec and the Maritime Provinces. The total population served is approximately 56 million people. From an electric load perspective, 20% of the Eastern Interconnection load is served within the NPCC region. For Canadian electricity requirements, 70% of that country's load is located within the NPCC Region. This represents a current NPCC regional composition by load that is approximately 45% U.S. and 55% Canadian.

Reliability is assured by the establishment of regionally-specific reliability criteria adopted by NPCC Inc. membership, which implement and augment broad-based, continent-wide standards, through; coordination of system design and operations; through assessment of adequacy and security; and, through monitoring and enforcement of compliance with such reliability criteria. NPCC Inc., through its open, stakeholder process for development of reliability-specific criteria, facilitates, to the extent possible, attainment of fair, effective and efficient competitive electric markets.

### **III. COMMENTS OF NPCC INC.**

NPCC Inc. strongly supports the Commission's commitment to maintaining regionally-specific, more stringent reliability criteria that are needed to address the particular needs of the Bulk Power System of Northeastern North America and inclusively those of the bulk power system within New York State.

State and regional reliability organizations have legitimate interests in enhancing reliability beyond the level achieved by compliance with NERC standards.<sup>8</sup> More stringent regional criteria that address unique regional needs or concerns make for a more robust overall bulk power system and allow greater flexibility when extraordinary events occur. Adherence to regionally-specific criteria, along with the NERC standards, is a fundamental part of Good Utility Practice.<sup>9</sup>

Commission adoption of those portions of the NPCC Inc. criteria that are more stringent than the continent-wide standards will complement Federal regulatory backstop authority by providing the necessary State regulatory backstop authority for regionally-specific criteria not backstopped by Federal law in the U.S. In addition, the Federal Power Act prohibits NERC or the Commission from ordering the construction of additional generation or transmission capacity or setting and enforcing compliance with standards for adequacy or safety of electric facilities. FPA § 215(h)(2). A Regional Entity cannot receive authority from NERC or the FERC for criteria in these areas; authority for the establishment and enforcement of these requirements comes from the State and Provincial governmental and/or regulatory authorities.

In May of 2006, the NPCC Inc. Reliability Coordinating Committee (“RCC”) endorsed a document identifying those portions of the NPCC Criteria more stringent than the NERC Standards.<sup>10</sup> This document presents the more stringent NPCC criteria and corresponding NERC standard, if one exists, and describes how the NPCC Criteria are

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<sup>8</sup> FERC Reliability Policy Statement, 107 FERC ¶ 61,052 at P 31.

<sup>9</sup> *Id.* at P23.

<sup>10</sup> See the May 31, 2006 NPCC Inc. Reliability Coordinating Committee minutes approving endorsement of the Mapping Document without dissent.



more stringent. A copy of the Criteria Mapping Document is attached to these comments and is also available on the NPCC website.

In particular, in the area of resource adequacy, NPCC Criteria requires:

Each Area's probability (or risk) of disconnecting any firm load due to resource deficiencies shall be, on average, not more than once in ten years. Compliance with this criteria shall be evaluated probabilistically, such that the loss of load expectation (LOLE) of disconnecting firm load due to resource deficiencies shall be, on average, no more than 0.1 day per year.<sup>11</sup>

The NERC Standards provide no equivalent requirement to limit the risk of firm load disconnection due to resource inadequacy. Further, this requirement in NPCC Criteria establishes the foundation for the NYSRC resource adequacy requirement.<sup>12</sup>

NPCC Inc.'s Regional Reliability Plan also provides processes beyond those required in NERC Standards that promote enhanced reliability through greater coordination between system operators. For example, as described in section 6.5 of the Regional Reliability Plan, NPCC convenes weekly conference calls to discuss expected operating conditions for the coming 10-day period that also includes representatives from neighboring regions, such as the MISO and PJM.<sup>13</sup> Moreover, NPCC has procedures in place to initiate an emergency conference call whenever one or more Reliability Coordinators feel it would serve to preclude or mitigate an emergency.<sup>14</sup>

NPCC Inc. requests that Commission action focus on adopting the more stringent NPCC Inc. Criteria identified in the Mapping Document and those more stringent

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<sup>11</sup> NPCC Inc. Criteria Document A-2, Basic Criteria for Design and Operation Of Interconnected Power Systems, Section 3.0.

<sup>12</sup> Reliability Rules A-R1 and A-R2, NYSRC Reliability Rules Manual Version 18, January 5, 2007.

<sup>13</sup> This process is also described in NPCC Procedure Document C-13, Operational Planning Coordination.

<sup>14</sup> This process is also described in NPCC Procedure Document C-01, NPCC Emergency Preparedness Conference Call Procedures.

elements of the Regional Reliability Plan. As these documents are living documents, they will be updated from time to time based on changes to the reliability requirements in the NERC Standards; NPCC Inc. Criteria changes or additions that are adopted through NPCC Inc.'s "Open Process"<sup>15</sup> and changes to the NPCC Inc. Regional Reliability Plan. NPCC Inc. will ensure that the Commission is made aware of any changes or additions to the list of more stringent NPCC Criteria and any changes to the Regional Reliability Plan.

#### **IV. NPCC INC.'S RECOMMENDATIONS**

In view of the foregoing, NPCC Inc. respectfully recommends that the Commission make the following findings in this proceeding:

1. The Commission has the authority and responsibility under EAct 2005 to adopt those portions of the NPCC Inc. criteria, identified in the May 2006 Mapping Document, and Regional Reliability Plan, as may be updated from time to time, that are more specific and more stringent than those proposed by the ERO and adopted by FERC, to augment the previously adopted rules of the NYSRC.
2. The Commission has the authority and responsibility under EAct 2005 to adopt those portions of the NPCC Inc. criteria that establish reliability requirements associated with resource adequacy that are outside the realm of standards proposed by the ERO and adopted by FERC, to augment the previously adopted rules of the NYSRC.
3. The more stringent NPCC Inc. Criteria identified in the Mapping Document and those more stringent elements of the Regional Reliability Plan will be updated from time to time based on changes to the reliability requirements in the NERC Standards; NPCC Inc. Criteria changes or additions that are adopted through NPCC Inc.'s "Open Process" and changes to the NPCC Inc. Regional Reliability Plan. NPCC Inc. will communicate such changes to the Commission to ensure the most current criteria apply in New York State.

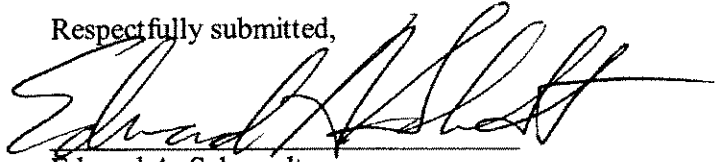
#### **V. CONCLUSION**

For the foregoing reasons, NPCC Inc. respectfully requests that the Commission take action in this proceeding consistent with these comments.

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<sup>15</sup> The NPCC Inc. Open Process is a mechanism through which comments and proposed revisions from all entities within the industry will be considered in the review of any given document.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Edward A. Schwerdt", written over a horizontal line.

Edward A. Schwerdt  
President and CEO  
NPCC Inc.  
1515 Broadway - 43 Floor  
New York, New York 10036

Dated: May 11, 2007

NPCC MORE STRINGENT

NPCC Reliability Standard (or related)	NPCC Document Language	NPCC Document #	NPCC Document Language	Reliability Standard Requirement Language	Requires	Regional Difference (Yes/No)	Comment	RRC Requirement?	Task Force?	Violation Risk Factor
EOP-001-0 Emergency Operations Planning	None	C15	None	None	None	Yes	Procedures for Solar Magnetic Disturbances Which Affect Electric Power Systems - This document is the NPCC operational guide on SMD (or GIC) and their possible effects on power systems, including recommended operating procedures to mitigate their impacts on the BFS.			
EOP-004-0 Disturbance Reporting	R1.4	R13 Sec. 2.2.2.2.2.2	It, in the judgment of the Regional Reliability Organization, after consultation with the Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, or Load Serving Entity in which a disturbance occurred, a final report is required, the affected Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, or Load Serving Entity shall prepare this report within 60 days. As a minimum, the final report shall have a discussion of the events and its cause, the conclusions reached, and recommendations to prevent recurrence of this type of event. The report shall be subject to Regional Reliability Organization approval.	It, in the judgment of the Regional Reliability Organization, after consultation with the Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, or Load Serving Entity in which a disturbance occurred, a final report is required, the affected Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, or Load Serving Entity shall prepare this report within 60 days. As a minimum, the final report shall have a discussion of the events and its cause, the conclusions reached, and recommendations to prevent recurrence of this type of event. The report shall be subject to Regional Reliability Organization approval.	R1.4	Yes	NPCC is more stringent in requiring the final report within 30 days instead of 60 days.			
EOP-004-0 Disturbance Reporting	R3.4	R13 Sec. 2.2.2.2.2.3	It, in the judgment of the Regional Reliability Organization, after consultation with the Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, or Load Serving Entity in which a disturbance occurred, a final report is required, the affected Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, or Load Serving Entity shall prepare this report within 60 days. As a minimum, the final report shall have a discussion of the events and its cause, the conclusions reached, and recommendations to prevent recurrence of this type of event. The report shall be subject to Regional Reliability Organization approval.	It, in the judgment of the Regional Reliability Organization, after consultation with the Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, or Load Serving Entity in which a disturbance occurred, a final report is required, the affected Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, or Load Serving Entity shall prepare this report within 60 days. As a minimum, the final report shall have a discussion of the events and its cause, the conclusions reached, and recommendations to prevent recurrence of this type of event. The report shall be subject to Regional Reliability Organization approval.	R3.4	Yes	NPCC is more stringent in requiring the final report within 30 days instead of 60 days.			
FAC-004-0 Methodologies for Determining Electrical Facility Ratings	R1.1.4	C29 Sec. 2.2.7	The methodology(ies) used to determine equipment and Facility Rating of the items listed (for both normal and emergency conditions (see R1.1.1, R1.1.2, etc. below): Terminal equipment (e.g., switches, breakers, current transformers, etc).	The methodology(ies) used to determine equipment and Facility Rating of the items listed (for both normal and emergency conditions (see R1.1.1, R1.1.2, etc. below): Terminal equipment (e.g., switches, breakers, current transformers, etc).	R1.1.4	Yes	NPCC is more stringent by including breakers, CT's etc. as part of it's Line or Transformer rating assessments. NERC does not mention rating a "Bus" at all.			
IRO-004-0 Reliability Coordination - Facilities		RRF Sec. 6.3	Each Reliability Coordinator - or its Transmission Operator and Balancing Authorities - shall provide, or arrange provisions for, data exchange to other Reliability Coordinators or Transmission Operators and Balancing Authorities via a secure network.	Each Reliability Coordinator - or its Transmission Operator and Balancing Authorities - shall provide, or arrange provisions for, data exchange to other Reliability Coordinators or Transmission Operators and Balancing Authorities via a secure network.		Yes	More specific wording on the requirements of TOP and BA entities.			
IRO-005-0 Reliability Coordination - Current Day Operations	R17	RRF Sec. 4.3	When an IRO, or SOI, is exceeded, the Reliability Coordinator shall evaluate the local and wide-area impacts, both real-time and post-emptive, and determine if the actions being taken are appropriate and sufficient to return the system to within IROL in thirty minutes. If the actions being taken are not appropriate or sufficient, the Reliability Coordinator shall direct the Transmission Operator, Balancing Authority, Generator Operator, or Load-Serving Entity to return the system to within IROL or SOI.	When an IRO, or SOI, is exceeded, the Reliability Coordinator shall evaluate the local and wide-area impacts, both real-time and post-emptive, and determine if the actions being taken are appropriate and sufficient to return the system to within IROL in thirty minutes. If the actions being taken are not appropriate or sufficient, the Reliability Coordinator shall direct the Transmission Operator, Balancing Authority, Generator Operator, or Load-Serving Entity to return the system to within IROL or SOI.	R17	Yes	NPCC criteria is more stringent in that it includes that the TLR procedure is sometimes per the appropriate need to use when dealing with SOI, or IROL, situations.			
MOD-014-0 Development of Steady State System Loads	R3	A2 Sec. 3.0	Each Area's probability (or risk) of disconnecting any firm load due to resource deficiencies shall be, on average, not more than once in ten years. Compliance with this criteria shall be evaluated probabilistically, such that the loss of load expectation (LOLE) of disconnecting firm load due to resource deficiencies shall be, on average, no more than 0.1 day per year.	Each Area's probability (or risk) of disconnecting any firm load due to resource deficiencies shall be, on average, not more than once in ten years. Compliance with this criteria shall be evaluated probabilistically, such that the loss of load expectation (LOLE) of disconnecting firm load due to resource deficiencies shall be, on average, no more than 0.1 day per year.	R3	Yes	NPCC is more stringent because NERC has no equivalent requirement to limit the risk of firm load disconnection due to resource issues.			

NPCC MORE STRINGENT

NERC Reliability Standard (or related)	Reliability Standard Requirement Language	NPCC Increment #	NPCC Document Language	Regional Difference (Yes/No)	Comment	RRO Requirement?	Task Force?	Violation Risk Factor
PRC-001-4	System Protection Coordination	A5 Sec. 2.4.1	Operating Time - Bulk power system protection shall take corrective action within times determined by studies on with due regard to security, dependability and selectivity. Adequate time margin should be provided taking into account study inaccuracies, differences in equipment, and protection operating times.	Yes	TFSP -NERC has a similar requirement in the TPL standards. NPCC is more stringent because it includes selectivity in the study.			
PRC-001-4	System Protection Coordination	A5 Sec. 2.4.2	2.4.2 Adequate time margin should be provided taking into account study inaccuracies, differences in equipment, and protection operating times. In cases where clearing time are deliberately extended, consideration shall be given to the following: § Effect on system stability or reduction of stability margins. § Possibility of causing or increasing damage to equipment and subsequent extended repair and/or outage time § Effect of disturbances on service to customers.	Yes	TFSP -NERC has a similar requirement in the TPL standards. NPCC is more stringent because it includes additional time margin.			
PRC-001-4	System Protection Coordination	A5 Sec. 3.0	Equipment and Design Considerations - this section deals with the detailed protection considerations involving CTs, VTs, Logic Systems, Microprocessor-based equipment and software, Batteries, Station Service supplies, Circuit Breakers, Telecommunication, Control Cables and Wiring, Environment and Grounding.	Yes	TFSP -NPCC language is more stringent because it includes redundancy in equipment and design considerations, such as dual batteries and trip coils, as well as alternate communication paths.			
PRC-001-4	System Protection Coordination	A5 Sec. 4.0	Specific Application Considerations - this section deals with the specific protection requirements of Transmission Lines, Transmission Stations, Breaker Failure, Generating Stations, IEDS, IEDs, Capacitor Banks and SVCs	Yes	TFSP -NPCC is more stringent because it also includes redundancy such as dual batteries and trip coils as well as alternate communication paths.			
PRC-005-4	Transmission Protection System Maintenance and Testing	B23	Guide for Maintenance of Microprocessor Based Protection Relays - The use of computer based technology for protective relays has influenced what is considered sufficient for periodic maintenance of microprocessor-based relays. The purpose of this document is to provide guidance for the maintenance of microprocessor-based protective relays as required in Section 2 of NPCC Maintenance Criteria for Bulk Power System Protection, Document A-4 on "verifying operating characteristics"	Yes	NPCC is more stringent by providing a guide to establish testing criteria for this newer technology introduced into the protective relaying field.			
PRC-012-0	Special Protective System Review Procedure	A11 Sec. 3.0	Equipment and Design Considerations - this section deals with the detailed special protection system considerations involving CTs, VTs, Logic Systems, Microprocessor-based equipment and software, Batteries, Station Service supplies, Circuit Breakers, Telecommunication, Control Cables and	Yes	TFSP -NPCC is more stringent because it also includes redundancy such as dual batteries and trip coils as well as alternate communication paths.			

NPOCC MORE STRINGENT

NERC Reliability Standard (or related Special Protection System Review Procedure)	Requirement	Reliability Standard Requirement Language	NERC Document #	NPOCC Document Language	Regional Difference (Yes/No)	Comment	RRO Requirement?	Task Force?	Violation Risk Factor
PRC-012-0	None	None	A11 Sec. 4 D	Specific Application Considerations – this section deals with the specific special protection system requirements of dealing with Breaker Failure events.	Yes	TPS/NPOCC is more stringent because it also includes redundancy such as dual batteries and trip coils as well as alternate communication paths.			
TPL Contingency Table 1	Category B	Single Pole Block, Normal Clearing 4. Single Pole (DC) Line	A2 Sec. 5.1f	Simultaneous permanent loss of both poles of a direct current bipolar facility without an AC fault.	Yes	NPOCC is more stringent to require synchronizing the loss of both DC poles.			
TPL Contingency Table 1	Category B faults	Single Line Ground (SLG) or 3-Phase Fault with Normal Clearing 1. Generator 2. Transmission Circuit 3. Transformer	A2 Sec. 5.1a	A2 Sec. 5.1a – A permanent 3-phase fault on any Generator, Transmission Circuit, Transformer or Bus Section with Normal Fault Clearing	Yes	Must withstand loss of two transmission circuits for a single fault. Must withstand a SLG fault with a Shuck breaker. Must withstand a 3-Phase Bus fault (NBRG only requires a SLG Bus fault and allows Loss of Demand or Transfer Contributions to deal with it).			
TPL Contingency Table 1	Category B faults	Single Line Ground (SLG) or 3-Phase Fault with Normal Clearing 1. Generator 2. Transmission Circuit 3. Transformer	A2 Sec. 5.1b	A2 Sec. 5.1b – Simultaneous permanent phase-to-ground faults on different phases of each of two adjacent circuits on a multiple circuit tower with Normal Fault Clearing					
TPL Contingency Table 1	Category C	SLG Fault, with Normal Clearing 1. Bus Section 2. Breaker (failure or internal fault)	A2 Sec. 5.1a and 5.1c	A2 Sec. 5.1a – A Permanent 3-phase fault on any Generator, Transmission Circuit, Transformer or Bus Section with Normal Fault Clearing	Yes	Must withstand loss of two transmission circuits for a single fault. Must withstand a SLG fault with a Shuck breaker. Must withstand a 3-Phase Bus fault (NBRG only requires a SLG Bus fault and allows Loss of Demand or Transfer Contributions to deal with it).			
TPL Contingency Table 1	Category C	SLG Fault, with Normal Clearing 1. Bus Section 2. Breaker (failure or internal fault)	A2 Sec. 5.1a and 5.1c	A2 Sec. 5.1a – A Permanent 3-phase fault on any Generator, Transmission Circuit, Transformer or Bus Section with Normal Fault Clearing	Yes	NPOCC is more stringent in that the bus fault can be 3-phase instead of SLG and no allowance is made in NPOCC for uncontrolled Loss of Demand or Contribution of Transfers to deal with the results.			
TPL Contingency Table 1	Category C	Bipolar Block, with Normal Clearing 4. Bipolar (DC) Line Fault (non 3-Ph) with Normal Change 5. Any two circuits of a multiple-circuit tower line	A2 Sec. 5.1f and 5.1b	A2 Sec. 6.1e – A permanent SLG fault on a Circuit Breaker with Normal Clearing (Normal Clearing for this condition may not always be high speed)	Yes	NPOCC is more stringent for DC bipoles because it covers loss of both DC bipoles for a non-fault condition.			

NPCC MORE STRINGENT

	NERC Reliability Standard (or related)	Require ment	Reliability Standard Requirement Language	NPCC Document #	NPCC Document Language	Regional Difference (Y/N/No)	Comment	NERC Requirement?	Test Force?	Violation Risk Factor
TPL Contingency Table 1	Event(s) resulting in the loss of two or more (multiple) elements	No equivalent	none	A2 Sec. 7.1h	Sudden loss of fuel delivery system to multiple plants, (i.e. gas pipeline contingencies, including both gas transmission lines and gas mains)	Yes	No NERC equivalent requirement			
TPL Contingency Table 1	Event(s) resulting in the loss of two or more (multiple) elements	No equivalent	none	A2 Sec. 8.0	Extreme System Condition Assessment (ESCA) - The bulk power system can be subjected to wide range of other than normal system conditions that have low probability of occurrence. One of the objectives of ESCA is to determine, through planning studies, the impact of these conditions on expected steady-state and dynamic system performance. Sec. 1b - Simultaneous permanent phase-to-ground faults on different phases of each of two adjacent circuits on a multiple circuit tower with Normal Fault Clearing	Yes	No NERC equivalent requirement			
TPL-402-0	System Performance Following Loss of a Single Bulk Electric System Element (Category B).	R1.3.10	Include the effects of existing and planned protection systems, including any backup or redundant systems	A2 Sec. 5.1 & 6.1	Stability of the bulk power system shall be maintained during and following the most severe of the contingencies stated below. For each of the contingencies below that involves a fault, stability shall be maintained when the simulation is based on fault clearing initiated by the "system A" protection group, and also shall be maintained when the simulation is based on fault clearing initiated by the "system B" protection group	Yes	NPCC is more stringent in that it requires that both "A" and "B" protection systems be capable of maintaining stability.			
TPL-403-0		R4	none	B4 Sec. 5.1.7	5.1.7 - Review any excursions granted under the NPCC Guidelines for Requesting Exclusions to Sections 5.1(b) and 6.1(b) of the NPCC Basic Criteria for Design and Operation of Interconnected Power Systems (Document B-10). A Comprehensive Review should address all exclusions, but an Intermediate Review may focus on just those exclusions that may have been impacted by system changes since they were last reviewed.	Yes	NPCC is more stringent in having a mechanism for reviewing cases where exclusions from having to comply with the Basic Design Criteria are requested by a member organization.			
TPL-403-0		R4	none	B10	B10 - Guidelines for Requesting Exclusions to Sections 5.1 (b) and 6.1 (b) of the NPCC Basic Criteria for Design and Operation of Interconnected Power Systems	Yes	NPCC is more stringent in having a mechanism for reviewing cases where exclusions from having to comply with the Basic Design Criteria are requested by a member organization.			