UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Facilities Design, Connections and Maintenance Reliability Standards	)	**Docket No. RM07-3-000**

COMMENTS OF THE NEW YORK STATE RELIABILITY COUNCIL, LLC AND THE NEW YORK INDEPENDENT SYSTEM OPERATOR, INC.

Pursuant to the Federal Energy Regulatory Commission's ("Commission" or "FERC") August 13, 2007 Notice of Proposed Rulemaking ("NOPR") and August 20, 2007 *Federal Register* notice,[1] the New York State Reliability Council, LLC ("NYSRC") and New York Independent System Operator, Inc. ("NYISO") hereby submit these comments.

I. BACKGROUND

A. Overview of Reliability Standards

On August 13, 2007, the Commission issued a NOPR proposing to approve three Reliability Standards developed by the North American Electric Reliability Corporation ("NERC").[2] The three Reliability Standards, designated by NERC as FAC-010-1, FAC-011-1 and FAC-014-1, set requirements for the development of system operating limits of the Bulk-Power System for use in the planning and operation horizons.[3] The purpose of Reliability Standard FAC-010-1 is to "'ensure that System Operating Limits (SOLs) used in the reliable planning of the Bulk Electric System (BES) are determined based on an established methodology

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1 72 Fed. Reg. 46413 (Aug. 20, 2007).

2 *Facilities Design, Connections and Maintenance Reliability Standards*, Notice of Proposed Rulemaking, IV FERC Stats. & Regs. ¶ 32,622 (2007).

3 *Id.* at P 1.

or methodologies.'"[4] It applies to "'planning authorities' and requires each planning authority to document its methods for determining operating limits and to share the calculated limits with reliability entities."[5] Reliability Standard FAC-011-1, on the other hand, imposes on each reliability coordinator the obligation "to develop a SOL methodology for determining which of the stability limits associated with the list of multiple contingencies are applicable for use in the operating horizon based on actual or expected system conditions."[6] Lastly, Reliability Standard FAC-014-1 "requires each reliability coordinator, planning authority, transmission planner and transmission operator to develop and communicate SOL limits in accordance with the methodologies developed pursuant to FAC-010-1 and FAC-011-1."[7]

B. Role of NYSRC and NYISO

The NYSRC was approved by the Commission in 1999 as part of the comprehensive restructuring of the competitive wholesale electricity market in New York State.[8] Under the restructuring, the NYISO replaced the New York Power Pool as the entity with the primary responsibility for the reliable operation of the State's bulk power system. The NYISO also assumed responsibility for administration of the newly established competitive wholesale electricity market.

The NYSRC was established to promote and preserve the reliability of the New York State power system by developing, maintaining, and, from time to time, updating the reliability rules ("Reliability Rules") that govern the NYISO's operation of the State's bulk power system.

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4 *Id.* at P 9.

5 *Id.*

6 *Id.* at P 24.

7 *Id.* at P 34.

8 *Cent. Hudson Gas & Elec. Corp.*, 83 FERC ¶ 61,352 (1998), *order on reh'g*, 87 FERC ¶ 61,135 (1999).

The NYSRC develops Reliability Rules in accordance with standards, criteria and regulations of NERC, the Northeast Power Coordinating Council ("NPCC"), the Commission, the New York Public Service Commission, and the Nuclear Regulatory Commission.[9] Under the recently enacted federal energy legislation, the NYSRC's Reliability Rules must conform to Electric Reliability Organization ("ERO") reliability standards approved by the Commission, as required by the NYISO/NYSRC Agreement, and may be more specific or more stringent when necessary to meet the requirements of the State's bulk power system. The Commission-approved NYISO/NYSRC Agreement provides that the NYISO and all entities engaged in the transactions on the New York State power system must comply with the Reliability Rules adopted by the NYSRC.[10]

II. COMMENTS

In the NOPR, the Commission proposes to approve all three proposed standards as mandatory and enforceable Reliability Standards and seeks clarification from the ERO and public comment on several issues. The NYSRC and NYISO respectfully recommend that the Commission direct NERC to revise FAC-011-1 in accordance with the concerns discussed below.

A. The SOL Methodology for the Planning and Operating Horizons Should Be the Same

The SOL methodology should be the same for both the planning and operating horizons. Although Paragraph 25 of the NOPR notes that the provisions of Requirement R2[11] of

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[9] Agreement Between The New York System Operator And The New York State Reliability Council, Section 4.1, *available at* www.nyiso.com/public/documents/regulatory/agreements.jsp ("NYISO/NYSRC Agreement").

[10] *Id.* at §§ 2.1, 3.1.

[11] Requirement 2 of FAC-011-1 specifies the various factors that must be considered in the Reliability Coordinator's SOL methodology for providing reliable BES performance.

FAC-011-1 are the same as those in Requirement R2 of FAC-010-1, except for Requirement R2.3.2, the NOPR does not point out that the provisions of Requirement R2.4 of FAC-011-1 are very different from the provisions of Requirement R2.4 of FAC-010-1. Requirement R2.4 of FAC-010-1 requires consideration of credible multiple element Category C[12] contingency events for determining SOLs for the *planning horizon*. In contrast, Requirement R2.4 of FAC-011-1, which applies to the *operating horizon,* is ambiguous and inconsistent with FAC-010-1 regarding application of Category C contingency requirements. Both the planning and operating horizons should require consideration of credible multiple element contingencies.

Failure to consider this class of contingencies in determining SOLs during the operating horizon will compromise the reliability of the bulk power system and weaken system reliability. Specifically, Requirement R2.4 in FAC-010-1 states that "with all facilities in service and following multiple Contingencies identified in TPL-003 the system shall demonstrate transient, dynamic and voltage stability; all Facilities shall be operating with their Facility Ratings and within their thermal, voltage and stability limit; and Cascading Outages or uncontrolled separation shall not occur."[13] However, there is no reference to a similar requirement in Requirement 2.4 of FAC-011-1. Instead, there is a multiple contingency reference in Requirement 3.3 of FAC-011-1 whereby a Reliability Coordinator must have a "process for determining which of the stability limits associated with the list of multiple contingencies (provided by the Planning Authority in accordance with FAC-014 Requirement 6) are applicable for use in the operating horizon given the actual or expected system conditions." In other words,

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[12] These are events resulting in loss of two or more (multiple) elements listed in Category C of Table 1, "Transmission System Standards – Normal and Contingency Conditions", referenced by the TPL Standards.

[13] Transmission Planning Standard on "System Performance Following Loss of Two or More BES Elements".

the Reliability Coordinator is not required to operate the real time system within SOLs determined from credible multiple contingency scenarios.

A recent survey of the PJM transmission outage database conducted by PPL Electric Utilities, presented to the NERC Planning Committee on March 15, 2006, attached hereto as Attachment A, demonstrates the importance of considering multiple contingencies in the operating horizon. The survey found that multiple element contingencies occur on the PJM bulk power system on the average of eighteen times per year. This is a clear demonstration of the need to include multiple element contingencies in determining SOLs in the operating horizon.

B. SOL Requirements Should Be Consistent

The NYSRC and NYISO recognize that a Region is permitted to establish a regional standard requiring the consideration of credible multiple element contingencies in establishing SOLs for the operating horizon that may be more stringent than the requirements in the FAC-011-1. We note that, for example, the Western Interconnection proposes more stringent requirements in Requirement R2 of FAC-011-1 as a regional difference. However, the NYSRC and NYISO believe that recognizing multiple element contingencies in the operating horizon should be consistent in *all* of North America, and not only in certain Regions. A weak reliability standard in any Region, particularly in the Eastern Interconnection, could adversely affect the reliability in another Region, even if the other Region adopts a more stringent standard. The August 2003 Blackout, for example, originated in a region having less stringent operating criteria than the Northeast, but still adversely impacted systems in the Northeast.

C. The "Lowest Common Denominator" Approach Is Not Consistent with Commission Guidance

FAC-011-1 is not consistent with the guidance provided by the Commission for approval of a standard. The FERC Staff Preliminary Assessment of the NERC Reliability Standards

includes a warning that development of standards should not be based on a "lowest common denominator" approach if the resulting standard is not sufficient to ensure system reliability. However, the FAC-011-1 Standard Drafting Team ("SDT"), in response to our comments on this standard in February 2006, stated that "[t]he language in the proposed FAC-010-1 [this standard has since been re-numbered to become FAC-011-1] represents a compromise aimed at reaching the best consensus." Accordingly, we are concerned that the weaker standard set forth in FAC-011-1 was adopted by NERC in order to achieve greater support, and is an example of a "lowest common denominator" approach.

D. Responses to Concerns Raised by the NERC SDT

The SDT has stated in response to our comments on drafts of the FAC-011-1 standard that, in order to meet credible multiple element contingency requirements, the system would have to operate to meet "extreme contingency" conditions. This is simply not the case. Operators in New York and the Northeast regularly operate to the credible multiple element contingency requirements without having to meet the more stringent extreme contingency requirements. The SDT also postulates that meeting multiple element requirements may lead to load shedding, deliverability problems leading to rolling blackouts, and an increase in the number of Special Protection System activations. The SDT therefore concludes that a multiple element contingency requirement would lead to reduced reliability, not increased reliability. We disagree. NPCC has included a multiple element requirement in its operating criteria for more than 40 years. We are not aware that New York or any other control area in the Northeast has experienced any of the problems suggested by the SDT. As the survey of PJM indicates, the occurrence of multiple element contingencies is not uncommon and the system's ability to survive these events should be supported by appropriate operating standards, and not simply left to chance.

The SDT also postulates that the lower operating limits from multiple element requirements would restrict competition. This suggests that the mere possibility that a reliability standard may restrict competitive transactions is a sufficient reason for not adopting the standard, even if it would be effective in maintaining system reliability. Such an approach is unwarranted and inconsistent with the Commission's commitment to ensure that system reliability will be maintained in the context of a competitive wholesale electricity market.

E. FAC-011-1 Is Not Consistent with the Recommendations in the Final Report on the August 14, 2003 Blackout

The NYSRC and NYISO believe that FAC-011-1, as drafted, is not consistent with a critical recommendation in the Final Report on the August 14, 2003 Blackout in the United States and Canada, prepared by the U.S.-Canada Power System Outage Task Force ("Final Report"). Recommendation 25 in the Final Report states that the NERC process to reevaluate its standards should "not dilute the content of the existing standards."[14] In support of this recommendation, the Final Report refers to a comment on the Interim Report:

> A strong transmission system designed and operated in accordance with weakened criteria would be disastrous. Instead, a concerted effort should be undertaken to determine if existing reliability criteria should be strengthened . . . Most important, reliability should be considered a higher priority than commercial use. Only through strong standards and careful engineering can unacceptable power failures like August 14, 2003 be avoided in the future.[15]

Standard FAC-011-1, because its requirements are less stringent than that of FAC-010-1, (*i.e.*, they do not require consideration of credible multiple element contingencies) is not consistent with this recommendation in the Final Report.

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[14] Final Report at 161.

[15] *Id.*

III. CONCLUSION

For the reasons stated above, the NYSRC and NYISO urge the Commission to take action consistent with the comments provided herein.

Respectfully submitted,

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Attachment A

PPL Electric Utilities

Non-Random
Multiple Facility Forced Outages

NERC Version 0 – TPL standards

Table 1 Category C or D events

March 15, 2006

Presented by:
Jim Robinson

NERC Planning Criteria

- Table 1 categorizes contingencies
  - Category A, B, C, D, from normal operation to extreme events.
- Category B – loss of a single element due to SLGF or 3ph fault with Normal clearing.
  - generator, or
  - transmission circuit, or
  - transformer, or
  - single pole (dc) line

Multiple Facility Forced Outage beyond "Category B event"

- Category C (or D) multiple facility tripout (MFT) event represents a potential challenge to a single tripout operating criteria (Category B events)
- "Planned" system with planned Firm Transfers shall withstand Category C events
- "Operating" system with additional short term Firm and Non-Firm Transfers may not withstand Category C (or D) events.

Historic MFT Events

	MAAC Multiple Facility Trips (230kV and above)								
Date	**Bus Failure**	**#C**	**CB Failure**	**#C**	**D/C outage**	**#C**	**Mis-Op.**	**#C**	
2003	1	2	2	8	1	2	17	54	
2002	1	3	2	4	1	2	19	40	
2001	0	0	4	9	2	5	10	26	
2000	0	0	0	0	1	2	13	29	
1999	1	4	3	6	2	7	9	22	
1998	0	0	0	0	2	4	7	16	
1997	0	0	6	18	0	0	7	30	
1996	1	2	6	12	0	0	13	34	
									TOTAL
Average	0.57	3	3	2.478	1.3	2.44	**13.6**	**2.6**	**18.4**
	events per yr	ckts per event	events per yr	ckts per event	events per yr	ckts per event	**events per yr**	**ckts per event**	**events per yr**
Outages/yr /device	0.0018		0.0030		0.018		0.041		
MTBF yrs	**571**		**328**		**55**		**24**		

Multiple Facility Trip (MFT) Summary

- Significant amount of MFT events will occur over a 5-10 year period.
- If ERO, or Regional Entity standards are lowered, the probability of a major system disturbance caused by an MFT will increase.
- Better maintenance to prevent all MFTs is not the answer. However, continued focus on tracking & fixing root causes of MFTs is appropriate.
- Pre-event technical support to get ready for MFT events is appropriate – such as stability limits to avoid cascades due to a Category C event.

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PPL Electric Utilities

Submission Contents