

Blackout Investigation – NYISO Follow-up Items
DOE Final Report
April, 2004

<u>Recommendation</u>	<u>NYISO Action</u>	<u>Comments</u>
1. Make reliability standards mandatory and enforceable, with penalties for noncompliance. Reliability standards should allow, where appropriate, flexibility to accommodate regional differences, including more stringent reliability requirements in some areas. <i>NYISO recommendation</i>	Monitor	National reliability legislation
2. Develop a regulator-approved mechanism for funding NERC and the regional reliability councils, to ensure their independence from the parties they oversee.	Monitor	
3. Strengthen the institutional framework for reliability management in North America. Commission independent review in organizational design on how to structure a reliability organization. Role of regional councils in reliability.	Monitor	NERC Functional Model
4. Clarify that prudent expenditures and investments for bulk system reliability (including investments in new technology) will be recoverable through transmission rates. <i>NYISO recommendation</i>	ESPWG	
5. Track implementation of recommended actions to improve reliability. Quarterly reporting to NERC and council	Monitor	

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6. FERC should not approve the operation of a new RTO or ISO until the applicant has met the minimum functional requirements for reliability coordinators	Monitor	
7. Require any entity operating as part of the bulk power system to be a member of a regional reliability council if it operates within the council's footprint.	Complete	
8. Shield operators who initiate load shedding pursuant to approved guidelines from liability or retaliation.	Monitor	
9. Integrate a "reliability impact" consideration into the regulatory decision-making process.	Monitor	
10. Establish an independent source of reliability performance information.	Monitor	
11. Establish requirements for collection and reporting of data needed for post-blackout analysis.	Monitor	

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12. Commission an independent study of relationships among industry restructuring, competition and reliability.	Monitor	
13. DOE should expand its research programs on reliability-related tools and technologies.	Monitor	
14. Establish a standing framework for the conduct of future blackout and disturbance investigations.	Monitor	
15. Correct the direct causes of the August 14, 2003 blackout. <ul style="list-style-type: none"> a. Interim voltage criteria b. Reactive resources c. Operational preparedness and action plan d. Emergency response resources e. Emergency response plan f. Operator communications g. Reliability monitoring emergency preparedness training for operators h. Operating Agreements NERC #1	In-House	
16. Establish enforceable standards for maintenance of electrical clearances in right-of way areas. PSC manages vegetation on R-O-W and the NYISO will track vegetation tripouts on bulk power facilities. NERC #4	Monitor	

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17. Strengthen the NERC Compliance Enforcement Program. Will require region council quarterly reporting. Compliance audits and public release of audit reports. – NERC #2	NYISO Audit April 13-15.	
18. Support and strengthen NERC’s Reliability Readiness Audit Program NERC #3	NYISO Audit April 13-15.	
19. Improve near-term and long-term training and certification requirements for operators, reliability coordinators, and operator support staff. <ul style="list-style-type: none"> a. Require training for planning staff b. Training for IT support staff c. Commission an advisory report by independent panel to address training issues NERC #5	Monitor	
20. Establish clear definitions for normal, alert and emergency operational system conditions. Clarify roles, responsibilities and authorities of reliability coordinators and control areas under each condition. – NERC #9	Complete	Revised NERC Operating Policies #5, 6, 9
21. Make more effective and wider use of system protection measures. <ul style="list-style-type: none"> a. Zone 3 relay b. Under-voltage load shedding c. Use of UFLS and UVLS NERC #7	Monitor	The TFSP and SPAS for action

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22. Evaluate and adopt better real-time tools for operators and reliability coordinators. a) Wide-area situational displays systems Independent testing and certification of industry EMS and SCADA systems. NERC #10	Monitor	
23. Strengthen reactive power and voltage control practices in all NERC NERC #6	In- House	
24. Improve quality of system modeling data and data exchange practices NERC #14	Monitor	
25. NERC should reevaluate its existing reliability standards development process and accelerate the adoption of enforceable standards NERC #13	Monitor	NERC Standing Committees NPCC task forces
26. Tighten communications protocols especially for communications during alerts and emergencies. Upgrade communication system hardware where appropriate. NYISO #2, #3 and PSC #3	In-House	Existing NPCC protocols
27. Develop enforceable standards for transmission line ratings. NYSRC has tie-line rating report for rating transmission lines	Monitor	Existing NYSRC Standards

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28. Require use of time-synchronized data recorders. NERC #12	Monitor	NPCC TFSP
29. Evaluate and disseminate lessons learned during system NERC #11	In-House	NYISO Restoration report NPCC Restoration report
30. Clarify criteria for identification of operationally critical facilities and improve dissemination of updated information on unplanned outages.	In-House	NPCC protocols exists
31. Clarify that the transmission loading relief (TLR) process should not be used in situations involving an actual violation of an Operating Security Limit. Streamline the TLR process	Monitor	NYISO does not use TLR
32. Implement NERC IT standards (Physical and Cyber security)	In-House	
33. Develop and deploy IT management procedures with regards to EMS automation.	In-House	
34. Develop corporate-level IT security governance and strategies Recommends that organization have a planned and documented security strategy, governance model, and architecture fro EMS automation systems.	In-House	

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35. Implement controls to manage system health, network monitoring and incident management.	In-House	
36. Initiate a U.S. –Canada risk management study dealing with vulnerabilities of shared electric infrastructure and cross border interdependencies	Monitor	
37. Improve IT forensic and diagnostic capabilities. IT support personnel for EMS automation systems are familiar with the systems design and implementation	In-House	
38. Assess IT risk and vulnerability at scheduled intervals	In-House	
39. Develop capability to detect wireless and remote wire line intrusion and surveillance	In-House	
40. Control access to operationally sensitive equipment	In-House	
41. NERC should provide guidance on employee background checks	Monitor	
42. Confirm NERC ES-ISACs the central point for sharing security information and analysis	Monitor	
43. Establish clear authority for physical and cyber security.	In-House	
44. Develop procedures to prevent or mitigate inappropriate disclosure of information	In-House	