

August 14 2003 Blackout Study Follow-up Status Report, September 2010

Supplementary NPCC Blackout Recommendations approved by the RCC on March 8, 2006

Recommendations

#	Assignment	Comments/Results	Priority & Status/ Schedule
2a	Transmission owners should investigate changes that could be made to improve the security of protection operation of the Homer City 345 kV transmission lines to Watercure and Stolle Road and recommend any proposed changes to TFSS and TFSP.	SS-38 provided swing data for relay testing April 2007. SS-38 guidance and performance evaluation provided. Installation completed on schedule in 2008. OOS functions remain out of service pending successful outcome of additional testing on the relays.	Low The outcome of testing is being addressed and any concerns regarding the results are being reviewed.
2 other	During the investigation of the Ontario/Michigan interface, if TFSS identifies that other interfaces should be considered as separation candidates, they should make additional recommendations to the RCC.	This will be reviewed by SS-38 through its Blackout Study Task 5 analysis.	Low Task 5 scope and schedule were updated and approved at the September 2010 RCC meeting and SS-38 has begun work
4	NPCC should continue to investigate the coordination between generating unit (generator, excitation system, and prime mover) protections and the UFLS program through its representation on the NERC System Protection and Control Task Force (SPCTF). <ul style="list-style-type: none"> i. TFSS should consider cases where generating unit protection cannot be coordinated with the UFLS program without compromising unit protection in future assessments of the UFLS program. ii. TFSS and TFSP should conduct a review of NPCC Criteria to ensure that any required coordination between the UFLS program and generators is included. (See Blackout Report conclusion 12)	A-03 changes include UFLS coordination with nuclear unit protection. SS-38 study of NPCC UFLS program modifications completed November 2008. Generator unit governor survey results sent to SS-38 in May 2007. SS-38 has reviewed these, along with ERCOT & WECC efforts, and completed a white paper on Governor Modeling.	High, but major endeavor SPCS report issued in fall 2009 and will be reviewed by SS-38 as part of Task 5

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	a)		
6b	<p>NPCC should assess what methods would be most effective for modeling mid-term dynamics in analysis of disturbances that propagate over a significant time period. Specifically,</p> <ul style="list-style-type: none"> i. TFSS should document what was learned during the blackout investigation regarding the modeling of mid-term dynamic effects. ii. TFSS should also summarize recent industry efforts. <p>This information will be used to evaluate whether to develop and maintain a mid-term dynamics model, including qualitative benefits to system analysis work and any associated costs. (See Blackout Report conclusion 17)</p>	<p>Under review by SS-38, in follow-up to UFLS study, parallel with Task 5.</p> <p>HQ described its methodology and the tools it has developed for mid-term dynamic modeling for TFSS in November 2007. HQ will develop documentation and share it with TFSS/SS-38 by Spring 2010. A more detailed report will be presented to TFSS in Summer 2010</p>	<p>Medium/ Low Completed</p>
6d	<p>The TFSS should review past industry efforts to study dynamic load behavior, such as the NPCC COSS-2 Study, and contact others within the industry to benefit from their research. The focus should be on behavior of load during large frequency and voltage excursions and the ability to model when load is tripped.</p> <p>The TFSS should recommend whether to develop improved models for use in analysis of major disturbances or to develop appropriate models at the time of analyzing a disturbance. (See Blackout Report conclusion 15)</p>	<p>Under review by SS-38, in follow-up to UFLS study, parallel with Task 5.</p> <p>PJM issued a RFP for dynamic load modeling – TFSS will track this.</p> <p>Load modeling is significant in limiting island simulations (CT & SENY). SS-38 is investigating load modeling efforts in other regions and will develop a whitepaper on this topic.</p>	<p>Low Ongoing. Work on modeling whitepaper will commence in 2011 and is expected to be completed in 2012 as scheduled in TFSS work plan 2011-2012.</p>