

Wisconsin System Operators (WSO) Spring Program

Session 1—May 1-4, 2006

Session 2—May 15-18, 2006

Session 3—May 22-25, 2006

Park Plaza, Oshkosh, Wisconsin

NOTE: For more information or to obtain a CD of the WSO Spring Session training materials, please contact Pat McMahan at the American Transmission Company at pmcmahan@atcllc.com or 608/877-8111. The CD will include the PowerPoint presentations and support materials (minus the simulation exercises); cost per CD is \$150.

AGENDA

Day 1/May 1

(0930—Registration)

1000—Welcome/Standards of Conduct and Anti-Trust Guidelines

Pat McMahan, Training and Compliance Project Manager, American Transmission Company

1020—Midwest ISO—Ensuring Reliable Power Transmission

David Zwergel, Director, East Regional Operations, Midwest ISO

This session will provide a high-level overview of the MISO organization, including the roles and responsibilities of MISO staff, its operating plan, real-time system monitoring tools, procedures, and training.

1200—Lunch

1300—(continue MISO discussion)

1415—Break

1430—Regulatory and Industry Developments—How Did We Get Here?

Jim Maenner, Manager-Energy Delivery Operations, Wisconsin Public Service Corporation

This session will provide a historical and current overview of the events, legislation and regulations shaping today's transmission utility industry. The session will focus on the NERC reliability standards and describe the relationship among the Midwest Reliability Organization (MRO), Reliability First Council (RFC), and Wisconsin electric utilities.

1630—Test

1700—End of day

Day 2/May 2

0800—Welcome/Open Forum

Pat McMahan, American Transmission Company

0815—“Keeping the Wheels on the Bus”—Managing Wisconsin’s Bulk Power System

Dale Zahn, Project Manager-Electric System Operations, We Energies
Mike Zahorik, Manager-System Operations, American Transmission Company

This presentation will provide a review of some past real and potential transmission events, including how these events were detected and/or predicted. The presenters will discuss in general terms the process and plans used to resolve these types of events; they will also discuss the roles and relationships during the events among the MISO, ATC, Balancing Authorities, marketers, generator Operators, power plant Operators,

customers, state commissions, federal agencies (DOE, NERC, FERC, NRC), local media, etc.

1000—Break

1015—“Putting the Wheels Back on the Bus”—Managing Wisconsin’s Bulk Power System During Abnormal/Emergency Situations

Francis Esselman, Transmission Reliability Project Manager, American Transmission Company

Neil Hermus, Superintendent-Distribution Operations Center, Wisconsin Public Service Corporation

This session, to last the balance of the day, will focus on the Operator’s response and analysis of degrading system conditions. Using predetermined scenarios and working in teams, the participants will respond to and evaluate a string of worsening events. The exercises will incorporate accountability (roles and functions of the various energy entities), technical issues (such as ratings and voltage limits), proper communication protocols (both internal and external) and procedural issues.

1700—End of day

Day 3/May 3

0800—Welcome/Open Forum

Pat McMahan, American Transmission Company

0815—“Finding the Wheels to the Bus”—Recreating a Blackstart Island

Francis Esselman, American Transmission Company

Neil Hermus, Wisconsin Public Service Corporation

Using the American Transmission Company's (ATC's) Dispatch Training Simulator (DTS), a sample demonstration will be conducted by an ATC Subject Matter Expert to provide an example of the process used by ATC, as a Transmission Operator, to create a Blackstart island in the event of a total power blackout in a portion of the ATC footprint. The demonstration will describe the required interactions between the Transmission Operator, Balancing Authority and Generator Owner/Operator to restore power to one

of the potential islands contemplated as part of ATC's System Restoration Plan.

Please note that the simulation will not include or display any real-time transmission sensitive information as part of the simulation. In addition, the demonstration will be held at a location remote from any of ATC's transmission control centers; i.e. in a conference room at a hotel in Oshkosh, Wisconsin.

The information contained in ATC's System Restoration Plan is considered Critical Energy Infrastructure Information (CEII) protected from widespread distribution. Entities directly involved with system restoration and with a demonstrated need to know, or that can be reasonably deemed to be an entity that has a role in the Bulk Electric Reliability and/or restoration activities may request to view ATC System Restoration Plan materials at one of ATC's operating centers. Please note: ATC's System Restoration Plan will not be made available for general viewing at the class nor will a copy be provided to class participants; only a simulation of the type of actions taken by ATC under the ATC System Restoration Plan will be demonstrated via a simulation activity.

Requests to view the ATC Restoration Plan shall be directed to:
Office of Compliance at American Transmission Company

1000—Break

1015—Voltage Collapse

Edina Bajrektarevic, Operations Engineer, American Transmission Company

Voltage instability and collapse are due to a variety of causes but mainly to small, gradual changes (such as a natural increase in system load), or large, sudden disturbances (such as loss of a generating unit or a heavily loaded line), resulting in the system's inability to meet its reactive power requirements. This session will look at the various mechanisms involved and the tools used to provide for an adequate analysis of the reactive compensation system.

1200—Lunch

1300—Emergency Operations Simulation Exercises

Tim Walkowski, Dispatch Training Simulator (DTS) Instructor, American Transmission Company

Using selected EPRI Operator Training Simulator (OTS) modules, participants will have the opportunity through hands-on participation to learn more about voltage collapse issues and emergency operations for MVA overloads (load shedding/voltage issues).

1430—Break

1445—(continue EPRI OTS exercises)

1630—Test

1700—End of day

Day 4/May 4

0800—Welcome/Open Forum

Pat McMahan, American Transmission Company

0815—NERC System Operator Certification Program

Bobbi Welch, Manager-Operations Support, American Transmission Company

This segment of the program will provide an update to NERC's CEH program, including background and mechanics to the program, transition plans, etc.

0915—Break

0930—“Making a Better Wheel”—Lessons Learned

Rick Stegehuis, Power System Supervisor, We Energies

Darrel Yohnk, Assistant Manager-Pewaukee Control Center, American Transmission Company

This session will profile major events to the transmission system and the actions taken to resolve them. Some of the events will include a discussion

of the Silver Lake dam break that occurred in the Spring of 2003 and the blackout that occurred in the UP in December 2003.

1130—Test

1200—End of session

CONTINUING EDUCATION HOURS

The American Transmission Company is an approved provider of North American Electric Reliability Council (NERC) Continuing Education Hours; CEHs will be awarded to those who attain a minimum of 70 percent on the course examinations as well as meet the course attendance requirements, including daily sign in. The course is expected to provide approximately 20 hours of CEHs and 19 emergency training hours.

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