

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Agenda

Power Plant and Transmission System Protection Coordination Workshop

March 17, 2010 | 1 p.m. – 5 p.m.
March 18, 2010 | 8 a.m. – 12 noon
Phoenix Convention Center
100 N. 3rd Street
Phoenix, AZ

Workshop Objectives

- Disseminate information within the industry contained in the NERC System Protection and Control Subcommittee's Technical Reference Document, Power Plant and Transmission System Protection Coordination.
- Explore generating plant protection schemes and their settings, which may contribute to undesired trips during system disturbances or extreme stressed system conditions.
- Identify power plant protections and transmission system protections that are required to coordinate with each other and with the transmission system design and performance.
- Promote information exchange between the Generator Owner and Transmission Owner or Planning Coordinator.
- Present a technical basis, with examples, for evaluating coordination between generating plant protection and transmission system protection.

Who Should Attend?

- Engineers responsible for specification, design, and setting of power plant and generator protection systems.
- Engineers responsible for specification, design, and setting of transmission system protection.
- Engineers and analysts responsible for transmission planning or operating studies who desire a better understanding of how power plant and transmission system protection systems respond during system disturbances.

Presenters

- Jon Gardell – Quanta Technology/Gardell Power Consulting, Inc.
- Hank Miller – AEP Service Corp.
- Phil Tatro – North American Electric Reliability Corporation
- Joe Uchiyama – U.S. Bureau of Reclamation
- Tom Wiedman – Wiedman Power Consulting Ltd.
- Murty Yalla – Beckwith Electric Company, Inc.

Agenda

Wednesday, March 17

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| 1:00–1:15 | Welcome and Workshop Overview |
| 1:15–2:30 | Technical Reference Document Overview |
| 2:30–3:00 | Power Plant and Transmission System Protection Fundamentals |
| 3:00–3:15 | Break |
| 3:15–3:45 | Power Plant and Transmission System Protection Fundamentals
(Continued) |
| 3:45–5:00 | Phase Distance (21) and Voltage-Controlled or Voltage-Restrained
Overcurrent (51V) Protection |

Thursday, March 18

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| 8:00–9:00 | Loss-of-Field (40) and Out-of-Step (78) Protection |
| 9:00–10:00 | Volts/Hertz (24), Under/Over-Voltage (27/59), and
Under/Over-Frequency (81 U/O) Protection |
| 10:00–10:15 | Break |
| 10:15–11:15 | Generator Step-up Transformer Backup (51T, 51TG) and
Breaker Failure (50BF) Protection |
| 11:15–11:45 | Other Generator Protection with Minimal Coordination
Requirements (32, 46, 50/27, 59GN/27TH, 87T, 87G, 87U) |
| 11:45–12:00 | Summary, Discussion, Next Steps, and Wrap Up |