



WECC System Operator Training Power System Dynamics Dynamics of Disturbances

These courses are taught by Mike Terbrueggen, P.E. of Operations-Training-Solutions (O-T-S). They are intended for highly experienced operating personnel and are advanced courses. Attendance of the Power System Dynamics course is a prerequisite for attending the Dynamics of Disturbances course as the theory is taught in Power System Dynamics and applied in Dynamics of Disturbances.

Power System Dynamics and Dynamics of Disturbances are sponsored by WECC. Power System Dynamics and Dynamics of Disturbances are held from Tuesday 8:00 am – Friday 4:00 pm. For details on NERC CE Hours that are awarded for each course please contact O-T-S at mike@o-t-s.com.

Primary Topics included:

- Review of Fundamentals of AC/DC theory, Relaying, Equipment and Operations
- Active and Reactive Power Transfer Equations and Limits
- Dynamic Event Control and Classifications for Voltage, Stability and Frequency
- Frequency Control and Response by use of AGC, Reserves, Governors, Relaying, Time Error Adjustments, and Compliance to Standards and Criteria
- Cause and Effect of Voltage Excursions and Deviations
- Purpose and Operation of Voltage Control Equipment
- Voltage Stability and Collapse
- Power Angle Stability and Out-of-Step Protection
- Introduction to Power Oscillations
- In-Depth Review of Actual Disturbances in North America