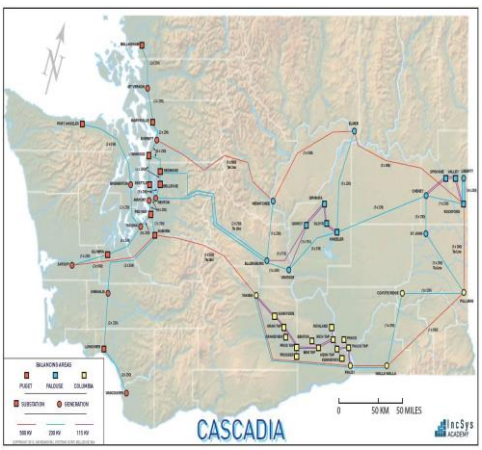
DCS & Contingency Reserve Monitoring

This is a computer-based training module which consists of a video lecture and a simulation exercise. The instructor describes and differentiates the categories of operating reserves, discussing the requirements for each class of reserve as required by NERC Standard BAL-002 and explains the difference in spinning and non-spinning reserves while providing examples of what sources can be used as Contingency Reserve. The Instructor defines the Most Severe Single Contingency and provides examples while states the DCS Performance Criteria for ACE from NERC Standard BAL-001, defines the term Percentage Recovery, and states the penalty of holding additional reserves if ACE is not recovered after reportable disturbances. Instructor describes the Contingency Event Recovery Period, Contingency Reserve Restoration Period and Reserve Sharing Groups. The students will operate the simulated power system as a Balancing Authority where they apply the requirements of NERC Standard BAL-002 and EOP-011 during an exercise of the loss of a major generating unit during peak load conditions. They will review Reserve Sharing Agreement for the simulated Balancing Authority and monitor the system and calculate reserves and prepare for the Most Severe Single Contingency. They will also use multiple methods to prepare and respond to the MSSC for the simulated Balancing Authority including scheduling interchange and bringing generating units online and changing MW setpoints, deploying contingency reserve, and making appropriate notifications based upon BAL-002 criteria while following the guidelines of EOP-011, apply an adjusted IROL in response to an Energy Emergency Alert Level 3.



Cascadia 3060 Course Objectives

DCS & Contingency Reserve Monitoring

COURSE CE HOURS		
OT	STD	SIM
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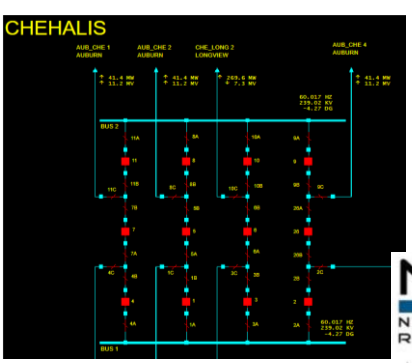
- Identify requirements and methods for monitoring and correcting Time Error
- Identify Interconnection equipment that may be used for different forms of Contingency Reserve
- Choose the available options a Balancing Authority may use for Contingency Reserve Obligations
- List the requirements for Contingency Reserve established by NERC Standards for Balancing Authorities
- Identify the requirements to restore ACE after a reportable disturbance
- Identify the forms of Reserves and when they are deployed
- Apply NERC standards on Disturbance Control Performance
- Respond to unit trips and restore ACE to zero or pre-disturbance negative value within Contingency Event Recovery Period
- Coordinate regulating reserves, non-regulating reserves and start-up of fast start units during the Contingency Event Recovery Period
- Restore contingency reserves during the Contingency Reserve Restoration Period
- Declare an Energy Emergency Alert so that the energy deficient Balancing Authority can receive assistance, including relaxation of an IROL to mitigate its energy emergency
- Following a declared EEA on a simulated system, reassess increasing the scheduled interchange limit to survive the loss of MSSC



NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

IncSys & NERC ID: INCSYS_001 is recognized by the North American Electric Reliability Corporation as a continuing education provider who adheres to NERC Continuing Education Program Criteria