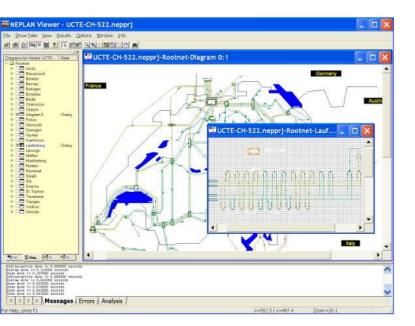


COURSE DESCRIPTION

INTCV573 NEPLAN – Graphic User Interface, Power flow and Short circuit modules



The goal

In this course, participants will get to know the utility of NEPLAN as a planning tool for electrical networks and how operational issues can be identified using the software. The priority is set to know the usage of graphical user interface of NEPLAN. After this course, the participants will be able to enter electrical networks in NEPLAN and will know what aspects are to be looked into with care during the data input. Participants will be able to represent the network according to their needs and will know how to work with various features of the software. This course also enable the participants to use the NEPLAN Modules Load-Flow and Short-Circuit efficiently. A brief overview of the related theory included in the module will enable the users to understand and adjust the calculation parameters optimally.

Learning objectives

The participants will be able to:

- Enter electrical networks in NEPLAN SLDs
- Data check points for NEPLAN
- Usage of the NEPLAN GUI
- Creating effective network diagrams for the real world systems
- Prepare power flow model of network in NEPLAN
- Identify the technical parameters needed for power flow and their significance
- Choose appropriate Power flow methods
- Visualize network issues with simulation results
- Performing short circuit analysis on the networks according to international standards
- Decision of switchgear ratings

Participant profile

Engineers who are not familiar with NEPLAN tool and would like to explore the uses of the software in network planning. Practicing engineers using NEPLAN tool who want to leverage the full strength of the software and its features for simulating the real world problems

Prerequisites

Engineering degree/ Diploma or equivalent in the field of electrical engineering. Basic knowledge of electrical circuits, elements of three phase power system and its operation, NEPLAN Introduction- GUI course

Topics

- Preparation of network model
- Spatial and topological representation of network
- Data inputs for network modeling
- Coloring of the network based on various philosophies
- Display of results
- Result boxes and text box creations
- Creation of element libraries
- Creation of symbol libraries
- Definition of areas/zones
- Use of graphic layers
- Creation of variants
- Export/import of graphics and results to office packages
- Working with maps in background
- Over view of the theory of load flow calculation (methods and Iteration process)
- Setting of Calculation parameters
- Setting of reference values
- Representation of results in tables and single line diagram
- Impact of On-load tap-changer of transformers
- Distributed Slack bus concept
- Calculation of active power loss sensitivities
- Area/Zone-regulation with transactiondefinition
- Load balancing
- Contingency Analysis
- Overview of the short circuit calculation methods

- Calculation parameters
- Calculation of 1 phase, 2 phase, 3phase and special faults
- Result representation in single line diagram and tables

Course type

This is a face to face class room training.

Learning methods and tools

Lectures, demonstrations, practical exercises and approx. 50% of the course is hands-on activities.

Laptop or tablet is required to have access to the e-documentation. Please bring your own device. Hands sessions will be given on the ABB desktops

Duration

3 days

To Register:

LMS:-<u>MyLearning</u>

Sign In: check <u>IE browser setting</u> Click SIGN IN to Sign-up or Log-in with your ABB account.

Search: please enter course number INTCV573 into the search field. (Please check the language filter EN)

The latest version of the course portfolio, and course schedule can be found on our

ABB PowerTEC Webpage :

http://new.abb.com/service/abbuniversity/india or

scan the below QR Code :

