



Reactive Power Planning Using PSS®E

PSSC 790

At a glance

The Siemens Power Academy TD believes that training is a component critical to the success of any organization. With our long history in the fields of power generation, transmission and distribution, instrumentation and controls, and equipment based training Siemens Energy, Inc., Siemens Power Technologies International (Siemens PTI) offers training solutions along the entire power conversion chain. Whether it is training for power system engineers, commissioning engineers, control room operators, or field maintenance and repair personnel, Siemens Power Academy TD - NA and the consultants at Siemens PTI want to be your comprehensive partner in training and professional development. We offer:

- Long-term career progression planning and training
- Short courses designed to gain technical skills quickly
- Standard catalog courses and custom on-site training programs
- Expert instructors and practical content that counts
- Regional training locations

The Challenge

Utility engineers who conduct studies with PSS®E must understand the fundamental concepts of power system behavior as well as knowing how to execute the many complicated routines within the program. This course is directed at the experienced PSS®E user who would like to increase his/her analytical skills in the analysis of voltage control issues in steady state and dynamic simulation.

PSSC 790 – Reactive Power Planning Using PSS®E is part of our Power System Software Engineering Course (PSSC) series. Courses designated with the PSSC prefix are designed to broaden the application skills and knowledge base of participants by offering a comprehensive range of topics related to the PSS® software. In **PSSC 790** participants will gain knowledge in:

- Voltage Criteria
- Voltage Collapse
- Steady State Assessment - Contingency analysis - PV analyses - QV analyses
- Optimal power flow - Capacitor placement - Load curtailment
- Reactive compensation - Shunt capacitors - TSC & TCR - SVC - STATCOM - Synchronous condensers - Series capacitors - Modeling in PSS®E
- Load characteristics - Induction motors - Load damping - Under voltage load shedding
- Dynamic voltage recovery study - Long-term simulation - Excitation limiters - Load tap changers
- Other voltage issues – Wind farms

Objective

This course provides experienced PSS®E users with instruction in the use of PSS®E at an advanced level for the analysis of voltage control issues (voltage collapse, reactive power compensation, dynamic voltage recovery, etc.). The course is structured to include lecture sessions and hands-on exercises for selected topics.

Prerequisites

Participants should either have setup and operating experience with basic PSS®E power flow and dynamic simulation applications.

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Answers for energy.

SIEMENS

Course structure

This is a three (3) day course. Material is presented in both morning and afternoon sessions for a total of six (6) hours of daily instruction. Standard course hours are 9:00 am to 4:00 pm each day.

Documentation

A bound set of course notes, including printed copies of the instructor's presentation and relevant handouts, will be provided to each course participant.

Continuing education units

All courses offered through Siemens Power Academy TD - NA meet the requirements for Continuing Education Units (CEUs) and Professional Development Hours (PDHs).

The CEU is the nationally recognized unit for recording participation in professional development and noncredit educational programs. Participants completing this course will be awarded CEUs based on the instructional hours of the course: one CEU is awarded for ten classroom hours of instruction.

Licensed engineers, on a voluntary or mandated basis, attend continuing professional education for licensure renewal to ensure competency. Continuing professional education for licensed engineers is measured in PDHs: one PDH is awarded for one hour of instruction.

The participant is responsible for maintaining records of courses taken in support of licensure.

Instructors

All courses offered through Siemens Power Academy TD - NA and Siemens PTI are developed and taught by leading industry engineers. In addition to their proven instructional ability, our engineers have advanced degrees complemented by first-hand knowledge and experience solving power system problems throughout the world.

Regional training locations or bring this course on site

In addition to our headquarters in Schenectady, NY, our 2010 Siemens Power Academy TD - USA schedule includes training at the following regional offices:

- Jackson, MS
- Houston, TX
- Minnetonka, MN
- Littleton, CO
- Mountain View, CA

Or, ***train at your location***

– Call for details.

Contact us

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