Distribution Volt/VAR Management

October 3 - 5, 2017 (2.5 days)
St. Louis, MO

What is this course about?

Power Factor Correction and Voltage Regulation are essential components for distribution system efficiency and power quality. This course introduces attendees to these concepts and moves quickly into the characteristics and application for power capacitor and voltage regulators then expands to provide information that will be helpful in specifying features and accessories for both devices. Upon completion of the course students will be capable of diagnosing distribution feeders for the proper sizing and placement of this equipment.

Who should attend?

Distribution system managers, engineers and technical personnel of any experience level that have a need to understand efficiency and power quality issues will benefit from this course. Those individuals responsible for the application and operation of power capacitors and voltage regulators will find this course helpful.

Continuing Education Credits

Upon completion, attendees will receive a certificate for 17 Professional Development Hours (PDH). Professional engineers seeking continuing education credits should verify acceptance of this course with their state board.

Tour of Fletcher Reinhardt Headquarters.

Fletcher-Reinhardt Company, is a wholesaler of electric utility equipment with distribution facilities located in St. Louis and Cedar Rapids, IA holding over $9M of inventory from over 300 manufacturers. Fletcher Reinhardt assembles pole-mount capacitor racks per customer specifications on site.

Fletcher-Reinhardt Service Company is a repair center for electric utility equipment including all brands of voltage regulators and controls, single and three phase reclosers and recloser controls, and capacitor controls.

Instructor Bios:

Chris Sticht, is a Senior Consultant for UC Synergetic. Mr. Sticht is a specialist in utility system planning, load analysis, planning software, underground, solar and Smart Grid. Chris has extensive background in planning, design, operations and protection. His background includes work on transmission systems, distribution systems, substations, and commercial building electrical systems. He has managed teams of engineers, designers and electricians. His experience includes consulting, contracting, work at two power flow software companies, and at several major utilities. He holds a MSEE from the University of Washington and a BSEE from Georgia Tech.

Jerry Josken is a Senior Consultant for UC Synergetic. Jerry holds a BS in Electrical Engineering Technology from the Milwaukee School of Engineering and a MBA from North Central College. During his 30+ year career with Eaton's Cooper Power Systems Jerry has served as Test Engineer, Design Engineer, Distribution Protection Engineer and Field Application Engineer. Past leadership positions include Chair of IEEE Rural Electric Power Conference (2012) and GLEMS Distribution Equipment /Controls (2013-2014). Presently, Jerry coordinates UCS Training Programs.

Course Outline

Classes are held 8:30AM to 4:00PM CDT Tuesday and Wednesday
Thursday 8:30AM to noon CDT

Volt/VAR Fundamental Calculations

- Resistance, Reactance, Impedance
- The Power Triangle
  - KW, KVAR, KVA
- System Loss Calculations
- Voltage Profile Analysis

Power Capacitors

- Characteristics & Application Factors
- Overcurrent Protection
  - Expulsion Fuses
  - Current Limiting Fuses
  - Switch Capacitor Banks
    - Switches
    - Sensors
    - Cap Controls

Tour Fletcher Reinhardt Co.

- Warehouse:
- Service Company
- Facilities to repair/refurbish
  - Step Voltage Regulators
  - Automatic Circuit Recloser

Voltage Regulators

- Characteristics & Application Factors
- VR Schematic & Nameplate
- VR External Components
- VR Controls
- Basic Setting
  - Set voltage, BW, TD, LDC
  - Features
  - Add Amp/Load Bonus
  - Reverse Power Operation
- Bypassing Voltage Regulators

Overvoltage Protection for Caps and VRs

Placement/Coordination of Volt/VAR devices

Special Application Considerations

- Dispersed Generation
- Auto Feeder Reconfiguration

Padmount Volt/VAR equipment

Course Location

This course will be held at the offices of Fletcher Reinhardt .
The street address is:

3105 Corporate Exchange Ct.
Bridgeton, MO 63044

Lodging

No block of rooms have been reserved at any hotel for this seminar.
Suggested hotels:

Candlewood Suites	Holiday Inn Earth City	Holiday Inn Express
3250 Rider Trail South	3400 Rider Trail South	13735 Riverport Dr.
Earth City, MO 63045	St. Louis, MO 63045	St. Louis, MO 63043

Course Registration

The course tuition is $1495 per person. Tuition will include course materials, refreshments, and lunches on Tuesday and Wednesday. Any company with four or more attendees will save 25%. Contact Jerry Josken (jjosken@ucseng.com) for more information.

Hotel accommodations, transportation and other incidentals will be the student's responsibility.

Click here to register online or complete the attached registration form. Cancellations received after September 26, 2017 will receive a credit that can be used for tuition on a future UC Synergetic Course. The credit is good for one year and is transferable within the same company. In the unlikely case of course cancellation, UC Synergetic liability is limited to refund of the course registration fee only.

For additional information about this course, other UCS course offerings, or on-site pricing, please contact Jerry Josken at (919) 348-3234 or via e-mail at: jjosken@ucseng.com.

Registration Form – Distribution Volt/VAR Management
October 3 - 5, 2017
St. Louis, MO

Payment methods:

By check, payable to **UC Synergetic, Inc.** Please attach check to the registration and mail to the address below.

--or--

By credit card. *An electronic invoice will be sent to you via email**. This is a secure payment method through* ***PayPal****. It does not require a PayPal account.*

Circle one: Enclosed is a check for Please charge my credit card

in the amount of $1595.00

Credit Card Type:_____ Card Number:_____

Name on Card:_____

Please Complete the Information Below:
(attach additional sheets for multiple registrations)

Attendee Name _____ Title _____

E-mail: _____
Please provide email address if you would like confirmation of your registration or would like to pay online through PayPal.

Company: _____

Telephone: _____

Fax: _____

Address: _____

City: _____ State _____ Zip _____

For payment by check, PO, or other questions regarding payment, please contact:

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