

Power Quality

Thursday
March 18, 2010
6:00 p.m. to 9:00 p.m.

Cancellation Policy

Registrants who cancel their registration may do so without penalty if written cancellation is received not less than seven business days prior to the seminar date. Cancellations received less than seven business days prior to the seminar date will be subject to a \$25 processing charge. No cancellations will be honored five business days or less prior to the seminar date. Telephone cancellations will not be honored.

Special Needs

If you require any special services or auxiliary aides in accordance with the **American Disabilities Act**, please contact the EAR Office.



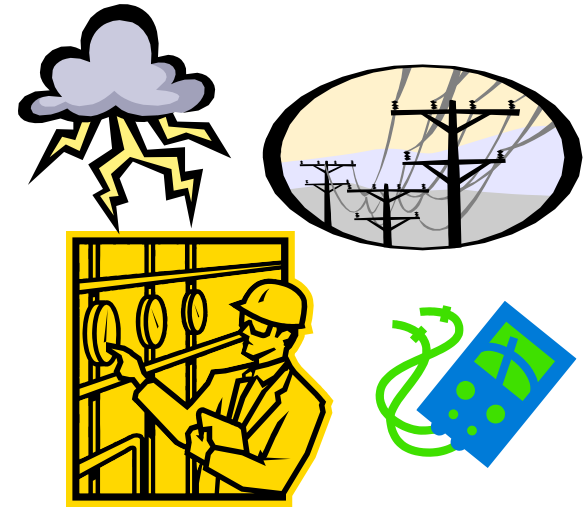
PO Box 20219, Rochester NY 14602-0219
(585) 538-6350 Fax (585) 538-6166
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Electrical Association of Rochester
P O Box 20219
Rochester NY 14602-0219

Power Quality Course

Power Quality



A Three Hour Course

Thursday
March 18, 2010
6:00 p.m. - 9:00 p.m.

RG&E Operations Center
1300 Scottsville Rd, Rochester

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Power Quality

Scope

To familiarize those in the electrical industry of power quality and its effects. Subjects that will be discussed include harmonics, power quality mitigation equipment and power quality standards. Case studies will be presented to highlight the material. This course is a high-level overview of power quality designs.

Instructor

Dave Shields has been employed at the Rochester Gas & Electric since his graduation from the University of Rochester in 1973 with a Bachelor of Science in Electrical Engineering. His work at RG&E has been in the areas of electric system protection, measuring and calculating electric and magnetic fields, electric transmission and distribution planning and power quality. He is presently a Lead Engineer for Power Quality. Mr. Shields has taught Electrical Utility Engineering at the University of Rochester and protective relaying at the New York Power Pool. He is a member of the IEEE and obtained an IEEE Region 1 Award for Technical Applications in Electric Power Quality Analysis in 1992 for the development of a high speed power quality instrument. He has been involved in the power quality area for the last 17 years and has presented several courses and programs for the Electrical Association of Rochester. Mr. Shields is a Registered Professional Engineer in New York State.

Certification

Students will receive a Certificate of Completion upon successful completion of the course.

This course has been approved by the Practicing Institute of Engineering for 3.0 PDH's.

Outline

INTRODUCTION
-Definitions -Effects of Power Quality
-Case Studies
INSTRUMENTATION
-Root Mean Square vs Peak Detecting
-Harmonics
MITIGATION EQUIPMENT
-Uninterruptable Power Supplies
-Power Line Conditioner
-Harmonic Filters -Reactors for ASD's
-Transient Voltage Surge Suppressors
STANDARDS
-IEEE-519 -UL 1449
-IEEE P1100 -ANSI C84.1
CASE STUDIES
-Residential/Commercial/Industrial Environments
POWER QUALITY AT RG&E
FUTURE OF POWER QUALITY

Date/Time/Place

RG&E Operations Center
1300 Scottsville Rd, Rochester

Thursday, March 18, 2010
6:00 pm to 9:00 pm

**Advance Registration and Payment Required
Class Size is Limited**

Fees

Registration fee includes all instructional materials.
Payment must accompany registration.

	<u>by 3/5</u>	<u>after 3/5</u>
EAR Members	\$55	\$64
CMD Registrants	\$65	\$74
Non Members	\$85	\$94

You will not receive a confirmation that you are registered. Attendance at this course does not imply any specific electrical qualifications. If you have any concerns, contact the EAR office.

Power Quality Course Registration Form

Please Print

Name _____

Title _____

Company _____

Address _____

City _____ St _____ Zip _____

Email _____

Work Phone (_____) _____

Fax (_____) _____

Home Phone (_____) _____

Check one:

EAR Members \$55 (\$64 after 3/5)

CMD Registrant \$65 (\$74 after 3/5)

Non Members \$85 (\$94 after 3/5)

Method of Payment:

Check/MO payable to EAR

Master Card Visa AmEx

Card # _____

Exp. Date ____/____ C V V Code _____
(last 3 digits on back of card)

Name on Card _____

Signature _____

**Return this form with your check made payable to
EAR to PO Box 20219, Rochester, NY 14602-0219
or fax with credit card information to 585-538-6166.**