

Plain Talk about the Electric Power System

Education for Power Industry Professionals

March 21-23, 2011 Phoenix, Arizona
Phoenix Convention Center

Co-located with 2011 IEEE PES Power Systems Conference and Exhibition

Registration Information on Page 5
Early Bird Registration Ends February 18th

THE ELECTRIC POWER SYSTEM enables our economy and society to function. In some way everything that impacts our lives, from where we live to where we work, from our government to our infrastructure, is dependent on a secure and reliable supply of electricity. Yet many individuals, including those who work in or with the electric power industry, do not have a basic understanding of the electric power system, how it operates or how it is evolving.

These courses aim to increase your understanding of the electric power system by providing you with practical knowledge that you can use as you work in or with this important industry.

Check out these exciting courses offered by the IEEE Power & Energy Society:

Our "Basics" Series For Non-Engineering Power Professionals

- **Power System Basics—Understanding the Electric Utility Operation Inside and Out**
- **Distribution System — Delivering Power to the Customer**
- **Transmission System—The Interconnected Bulk Electric System**

WHO SHOULD ATTEND:

PLAN TO ATTEND if you work within the power industry in a non-engineering capacity, or if you are a new power engineer or one transitioning to the power industry from another field. Others who would benefit from the course are those who work with the industry, such as utility board members, business executives, power brokers, power marketers, government officials, regulatory or legislative staff members, public affairs administrators, media professionals, attorneys, economists, accountants, or anyone with an interest in learning about the electric power systems upon which we all depend.



<http://www.ieee-pes.org/education/programs/plain-talk-courses>



COURSE DATES, DESCRIPTIONS & INSTRUCTOR BIOS

PLAIN TALK Courses March 21-23, 2011 — Phoenix, Arizona

March 21: Power System Basics—Understanding the Electric Utility Operation Inside and Out Anthony F. Sleva

The focus of this course is to provide a fundamental foundation in electric power systems, from basic formulas to the planning, operations, and equipment involved in generating, transmitting, and distributing electric power. Basic electrical terminology will be explained in simple to understand language with regard to design, construction, operation and maintenance of power plants, substations, and transmission and distribution lines. Anyone who is involved in some way with the electric utility industry can benefit from attendance at this course.

Topics covered in the course include an introduction to the fundamentals and basic formulas of electricity as well as the equipment involved in the electric power system. An overview of generation, substations, transmission, distribution, and utilization is provided. Protection, reliable operation, and safety are among the topics covered.



March 22: Distribution System—Delivering Power to the Customer Joseph L. Koepfinger & Maurice Ney

(Prerequisite for this course is Power System Basics or a familiarity with basic formulas and power system equipment.)

The focus of this course is to provide attendees with an overview of the issues associated with the planning, engineering, design, operation, and automation of electrical distribution systems. Types of distribution systems and network circuits, as well as engineering issues related to distribution systems will be explored. New concepts in the design, challenges, and operation of smart grid will be addressed. This course is intended for those who are not familiar with the delivery of electricity to the end user.

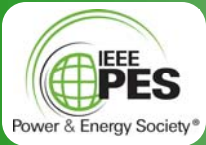
Topics covered in the course include an introduction to the types of distribution systems, issues associated with distribution planning such as outages and reliability, distribution engineering considerations relating to radial and secondary networks, and distribution automation. The course also provides an overview of electrical distribution operations, including the roles of utility personnel, construction and maintenance considerations, and trends in the industry. Smart grid and its impact on the distribution system will be explored.

March 23: Transmission System—The Interconnected Bulk Electric System Robert W. Waldele

(Prerequisite for this course is Power System Basics or a familiarity with basic formulas and power system equipment.)

The focus of this course is to provide participants with knowledge of how electric power is transferred from generation sources to distribution systems via the interconnected electric bulk power system known as "the grid." Basic physical laws governing the grid will be introduced, as well as the regulatory agencies involved in its governance. The great blackouts will be explored. This course is intended to increase participant's understanding of the electric grid and how it functions in the electric power system.

Topics covered in the course include an introduction to the fundamental concepts of power, energy, and power system stability as they relate to the grid. The grid is explored in terms of its interconnections, power flow, North American interconnections, and governing bodies such as NERC/ERO, ISOs, and RTOs. Reliability standards and contingency analysis are addressed. Issues related to the planning and operation of the grid, such as transmission and economic constraints, determining transmission transfer capability, and dealing with congestion are reviewed. The course also discusses the great blackouts, their root causes, and lessons learned.



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Anthony F. (Tony) Sleva, PE has worked in the electric power industry for almost 40 years. During his career, he designed substations, operated transmission and distribution systems, supported power plant operations (nuclear, gas, coal, oil, and hydro), worked with electric utilities throughout the United States, and assisted in the forensic analysis of failed electrical components and systems. In addition to his work with investor-owned electric utilities, rural electric utilities, and cooperative electric utilities, Tony has provided engineering services for independent power generators, distributed generation providers, dredging operations, mining operations, railway systems, and standby generator vendors. He is an ad hoc instructor at the University of Wisconsin-Milwaukee, where he presents courses in protective relaying applications, understanding power systems, motor theory and applications, and substation design. He is the author of the textbook "Protective Relay Principles," published by CRC Press. Tony is an experienced speaker who has presented hundreds of training sessions. He is a senior member of IEEE, a member of IEEE's Power System Relay Committee, a former member of IEEE's Nuclear Power Engineering Committee, and a licensed professional engineer. Sleva holds a BSEE from Pennsylvania State University. Tony is Technical Manager of Electrical Engineering for Altran Solutions, an engineering consulting firm headquartered in Cranbury, NJ. He can be contacted at tsleva@altransolutions.com.

Joseph L. Koepfinger is a consultant with 51 years of utility experience, recently retired from Duquesne Light Company. In his last position he was Director of System Studies and Research, where he was responsible for managing the research programs. While employed at Duquesne he was responsible for the conduct of special investigations of technical problems, insulation coordination, surge protection and, in particular, the studies of electrical transient conditions in power systems. Recent investigations under his leadership involve the study of the characterization and management of electromagnetic fields, cable failure, manhole explosions, transformer fire control, interconnection of distributed resources and advanced outage management systems. He has worked in the fields of protection, communications and control, and surge protection. He holds a Bachelor of Science and Master of Science in Electrical Engineering from the University of Pittsburgh. He is a licensed professional engineer in the state of Pennsylvania and a Certified Cogeneration Professional.



Maurice Ney has extensive experience in operations, engineering, planning, and customer care. He has a proven record of achieving continuous improvements in process, costs, system improvements, and customer satisfaction. In addition he has significant experience in managing transmission and distribution operations in the utility industry. As an independent consultant on utility operations, he has worked as a team member on projects for utilities in the Northwest and on the East Coast performing evaluations of current state transmission and distribution operations and the design of future state processes for improved performance and reliability. He has worked with the Electric Power Research Institute as a technical consultant on outage management, recovery and disaster planning, strategic planning and development of technical specifications for the design of an Advance Outage Management System, and the development of key initiatives targeted at the prevention of, preparedness for, and recovery from man-made and natural disasters and the major electric power outages that can accompany them. He has held various engineering and management positions at a major electric utility. During this time, he has actively participated in the development of a \$150 million capital and operating budget, developed an incentive compensation model based on profitability and customer satisfaction, developed strategies for complying with state and federal regulatory agencies, and assisted in the development of a process-focused organization and strategies to attain top quartile performance as defined by customer satisfaction cost/customer, and reliability. He received a Bachelor of Science degree in Electrical Engineering from Pennsylvania State University and he is a licensed professional engineer in Pennsylvania.



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Robert W. Waldele is a power system consultant with over 35 years of experience in EHV transmission system reliability studies, power system operation, and system operator training. He holds a BSEE from Northwestern University Technological Institute (McCormick School of Engineering). Bob joined the New York Power Pool in 1972 in the energy management system support group. As a Senior Engineer in Transmission Planning he coordinated system planning and reliability studies for the coordination of the bulk transmission system in New York State. While there he also served as Manager of System Operator Training and developed the transition program to open access and market operation under the New York Independent System Operator, Inc. (NYISO). Following NYISO start-up, he was named Manager of the NYISO Operations Engineering group and the electric System Planning department. He has served on a number of working groups under the Northeast Power Coordinating Council, including Special Protection Systems, Interconnected System Dynamics, Dynamic Controls and System Operator Training. He was a member of the New York State Reliability Council's Reliability Rules Subcommittee. He has been an active participant in IEEE working groups including Transmission Subcommittee, Power System Dynamics, and the Operator Training Working Group. He served on the US- Canada Joint Task Force August 14, 2003 Blackout investigation "Operator Tools, Training & EMS Performance Evaluation" team, and supported the Sequence of Events and Root Cause Analysis teams.



See Page 5 for Registration Form and Details!

Early Bird Ends Feb. 18th

ABOUT IEEE PES:

The Power & Energy Society is the society of electric power and energy professionals throughout the world. It provides the world's largest forum for sharing the latest in technological developments in the electric power industry, for developing standards that guide the development and construction of equipment and systems, and for educating members of the industry and the general public.

PES Plain Talk courses for the power industry professional will help you to understand technical aspects of the electric power industry, even if you do not have an engineering background. You will gain insights into the concerns of engineers, the demands of regulators and consumer groups, and the factors and trends that impact the operation of today's electric power systems. These courses are also appropriate for new engineers to the industry, or for engineers in other fields who are transitioning to the electric power industry.



The IEEE has been approved as an Authorized Provider by the International Association for Continuing Education and Training (IACET). In obtaining this approval, the IEEE has demonstrated that it complies with the IACET Standards which are widely recognized as standards of good practice internationally. As a result of their Authorized Provider membership status, IEEE is authorized to offer IACET CEUS for its programs that qualify under the IACET Standards.





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Phoenix Convention Center
100 N. Third Street Phoenix, AZ 85004

Co-located with IEEE PES Power Systems Conference & Expo

Name _____ Company _____ Title _____
Street _____ City _____ State _____ Zip _____
Phone _____ Fax _____ Email _____

EARLY BIRD DISCOUNTS: An early bird 10% discount is offered to attendees who register and pay on or before February 18, 2011.

GROUP DISCOUNTS: 10% discount offered to two or more conference registrants from the same company or organization. Contact Susan Koval (s.koval@ieee.org, 732-562-6897) for discount code prior to online registration.

Fee includes continental breakfasts, lunches, refreshment breaks and all course materials. All Plain Talk registrants will also receive a FREE Exhibit Hall pass to the PSCE conference exposition.

1-CHOOSE YOUR ENROLLMENT OPTION:

THREE COURSE ENROLLMENT (please check the appropriate box)

- Early Bird Fee** (paid registration on or before Feb. 18, 2011) - \$1,935
- Regular Fee** (paid registration after Feb. 18, 2011 and on site) - \$2,150
- Group Rate** (10% discount from Early Bird or Regular Fee)
On or before Feb. 18, 2011: \$1,742 per person After Feb. 18: \$1,935 per person Group Name: _____

TWO COURSE ENROLLMENT (please check the appropriate box)

- Early Bird Fee** (paid registration on or before Feb. 18, 2011) - \$1,360
- Regular Fee** (paid registration after Feb. 18, 2011 and on site) - \$1,510
- Group Rate** (10% discount from Early Bird or Regular Fee)
On or before Feb. 18, 2011: \$1,224 per person After Feb. 18: \$1,360 per person Group Name: _____

ONE COURSE ENROLLMENT (please check the appropriate box)

- Early Bird Fee** (paid registration on or before Feb. 18, 2011) - \$715
- Regular Fee** (paid registration after Feb. 18, 2011 and on site) - \$795
- Group Rate** (10% discount from Early Bird or Regular Fee)
On or before Feb. 18, 2011: \$644 per person After Feb. 18: \$715 per person Group Name: _____

2-CHOOSE YOUR COURSE(S):

- Power System Basics
- Distribution System
- Transmission System

TO REGISTER ONLINE, AND TO FIND INFORMATION ON LOCATION AND ACCOMMODATIONS:

GO TO www.ieee-pes.org and follow the links to EDUCATION/PROGRAMS/PLAINTALK

OR

- Mail to: IEEE-PES Plain Talk, 445 Hoes Lane, Piscataway, NJ 08854
- FAX to: (732) 562-3881
 - Check (Payable to IEEE-PES)
 - Purchase Order—Please attach a copy of the Purchase Order along with your registration form.
 - Credit Card: _____ VISA _____ MasterCard _____ American Express
Card # _____ Exp. Date _____ Security Code: _____
Name on Card _____ Authorized Signature _____
Address and Phone Number of Card Holder: _____

TOTAL ENCLOSED \$ _____

Please contact Susan Koval (s.koval@ieee.org , (732) 562-6897) or visit www.ieee-pes.org for additional information.

Cancellations made in writing prior to March 7, 2011 will be fully refunded, less a \$50 cancellation fee. There will be no refunds after March 7, 2011. If an enrollee is unable to attend, the fee may be used by a substitute, or for enrollment in a future course. In the unlikely event of an event cancellation, registrants will receive a full refund for the cost of registration only.