The Electric Utility management Program
At New Mexico State University presents

Life Extension of Substations
Replacement or Refurbishment

A 2-day seminar

August 10-11, 2006
Jerry Shaw Conference Room
Goddard Hall    MNSU Main Campus

Includes the Friday afternoon seminar

Professional Ethics by Dr. Ed Pines

(which meets the new mandatory NMSPE
and NSPE continuing-education requirements)

Taught by

Gene Wolf, PE   Vice Chair, IEEE/PES T&D Committee

Gary Stephenson, PE   Technical Consultant

Space is limited. Schedule, course information, and registration form are available
at the course website http://www.ece.nmsu.edu/~eump/
and click on SHORT COURSES 2006

Substantial, combinable discounts are available for
●Multiple enrollments from same company
●Electric Utility Management Program (EUMP) sponsor organizations
Life Extension of Substations
Replacement or Refurbishment

OVERVIEW:
It is a challenging time for utilities and the people that work in them. Competition compels utilities to minimize costs wherever possible. Customers demand better service, reliable power and quality. Operations and maintenance costs continue to rise, but at the same time there is pressure to reduce those O&M costs. That is the good news. The bad news is the basic infrastructure has pretty much reached the end of its design life. At the same time, demand for power continues to increase placing higher stress on the already ailing facilities. The experienced personnel who could fix it are retiring at an unprecedented pace and are not being replaced. So the question is “are yesterday’s substations able to supply today’s demands? Should the substation equipment be replaced or refurbished? This seminar will address the problems, the new technologies, and the possible solutions. It will address a methodology for maintenance. Also, it will address a strategy to evaluate the condition of the equipment. And finally, provides an approach to estimating whether the equipment should be replaced or refurbished.

TOPICS COVERED: The seminar is divided into four parts:

I. INTRODUCTION - SUBSTATIONS
Basic introduction to substation equipment

Aging Equipment/New Technology

II. MAINTENANCE PRACTICES
- Introduction
- Preventive Maintenance
- Corrective Maintenance
- Reliability Centered Maintenance

III. INCREASED STATION RATINGS
- Introduction
- Ground Grid
- Fault Current
- Equipment Ratings
- Bus and Structures

IV. DC SYSTEMS
- Introduction
- Batteries
- Chargers
- Ratings

Who Should Attend
This seminar is designed to cover a wide range of topics on dealing with an aging infrastructure. Technicians, Engineers, Managers involved in Substations, Operations, Apparatus, and related functions would benefit from the practical information presented in this seminar.
About the presenters:

**Gene Wolf** has been designing and building substations for over 32 years and is an authority on nearly all aspects of substation design. An MSEE graduate of NMSU’s Electric Utility Management Program, he is currently Principal Station Engineer for Public Service Company of New Mexico and is a widely-recognized consultant, author, and instructor. His leadership positions in the IEEE/PES include Vice Chair of the IEEE PES T&D Committee, Chair of the HVDC & FACTS Subcommittee, and Chair of the DC & FACTS Economics & Operating Strategies Working Group. He is widely regarded as a panelist and lecturer.

**Gary Stephenson**, a BSEE graduate of NMSU, brings wide experience rural utility distribution design, construction, and maintenance. His years in electric cooperatives and investor-owned utilities have also given him extensive insight into engineering-based graphic information systems implementation, distribution system modeling, distribution station and line equipment testing and maintenance, and the application of RF and power-line carrier automated metering systems. He has supervised EPRI projects and IEEE Working Groups.
Location and Daily Schedule

Jerry Shaw Conference Room
Goddard Hall
New Mexico State University
Las Cruces, NM

August 10-11, 2006

8:15 a.m. Coffee and snacks
8:30 – 11:45 a.m. Morning Session (with break)
11:45 a.m. LUNCH (provided)
1:15 p.m. - 5:00 p.m. Afternoon Session (with break and refreshments)

The course is designed to meet the Continuing Education competency requirement for many professional registrations.

There will be approximately 6 contact hours per day.

A credit of 12 PDH (Professional Development Hours) will be provided to each attendee desiring it, upon completion of the entire course. This will appear on any NMSU transcript requested afterward (There is no additional charge for this, and the attendee does not have to be enrolled at NMSU as a regular student).

Lunch will be provided each day.

Refreshments will be served each morning and afternoon.
Registration Form

(Please print one per attendee and send, fax, or email to the address below. For multiple enrollments from one organization, you may list the persons, with the information required, in a file. Please note that a Social Security number is needed for each person desiring to receive CEU’s)

Life Extension of Substations Replacement or Refurbishment

Jerry Shaw Conference Room, Goddard Hall
New Mexico State University
Las Cruces, NM        August 10-11, 2006

Name:____________________________________________
Organization:______________________________________
Address, zip: ______________________________________
Phone, email: ______________________________________

SS# (needed if you wish to be awarded Continuing Education (CEU) credit)_______ - _______ - _______

Fee (select appropriate one):

Basic enrollment:
1 to 4 persons from your organization, each $695 $_____
5 or more persons from your organization, each $655 $_____

Employee of EUMP-sponsoring organization:
1 to 4 persons from your organization, each $650 $_____
5 or more persons from your organization, each $625 $_____

Early enrollment discount:
Deduct an additional $20 per person if payment is made by June 15 - ($_____

Total amount enclosed $_____

Please attach a check (made payable to New Mexico State University), or a company Purchase Order
Please Note:

1. Requests for refund of fees cannot be honored after 30 business days prior to the beginning of the course. Substitutions will be allowed, however, at no additional charge.

2. NMSU reserves the right to cancel this course no later than 25 days prior to the scheduled beginning date. In such an event participants will be notified as quickly as possible and a full refund of all registration fees will be made promptly.

I agree to the conditions stated herein.

Signature:______________________________

Mail to: Klipsch School of Electrical and Computer Engineering
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If you need a map, directions to the campus, a list of accommodations, or assistance in planning your stay, please feel free to contact us.