

FIFTEENTH ANNUAL

***JOINT UTILITY
TRAINING WORKSHOP***

JANUARY 23, 24, 25, 1990

RAMKOTA INN

605-336-0650

SIOUX FALLS, SOUTH DAKOTA



**SPONSORED BY
JOINT UTILITY TRAINING COMMITTEE
(JUTS)
SOUTH DAKOTA ELECTRIC COUNCIL**

PROGRAM

SESSIONS PROGRAM INFORMATION

Each session is designed as a 14 and 1/2 hour mini-course. Registration will be for one session only per individual. You will remain in that session for the entire length of the course with the exception of the GENERAL SESSION which everyone will attend on Tuesday afternoon. Certificates will be sent to your respective company if attendance has been continuous

REGISTRATION

Pre-Paid Registration will include breakfast on Wednesday and Thursday morning and noon meal on Wednesday.

\$65.00 Per Person
Tuesday, January 23, 1990
10 00 a.m. to 12 00 noon
Ramkota Inn

LUNCHEON

Wednesday, January 24, 1990
Ramkota Inn
12.00 p.m. to 1:00 p.m

GENERAL SESSION

Tuesday, January 23, 1990
Ramkota Inn - Exhibit Hall
12:30 p.m. to 2:30 p.m.

Kyle Roberts, Loss Control Coordinator, of Tallahassee, Florida, is presenting, "It Could Cost You The Shirt Off Your Back." Attendance is required

MINI- COURSES WILL BE:

Tuesday	2:30 p.m to 5:00 p.m.
Wednesday	8:00 a.m. to 5:00 p.m
Thursday	8:00 a m to 12 00 p m

SESSION I

Ramkota Inn
Crystal Room

LEADERSHIP SEMINAR

Registration Fee \$65.00

PART I

Tuesday, 12:30-2.30 p m.

General Session: This Could Cost You The Shirt Off Your Back

PART II

Tuesday, January 23 -- 2:30 p.m - 5 00 p m

Wednesday, January 24 -- 8:00 a m. - 5:00 p m

Thursday, January 25 -- 8 00 a m -12 00 p m.

TITLE: Being An Effective People Manager
Training Employees
Communication
Implementing and Selling Change
Improving Listening Skills
Improving Employee Performance
Leadership and Delegation
Teambuilding
Managing Time and Stress
Handling Complaints
Communicating Upward
Values and Workers: Building relationships at work
Using Job Descriptions Effectively
Motivating Others
Setting Goals
Attitude and How it Works
Self Esteem

Instructor: Jim Kellar, Training Associates, Sioux Falls, SD

Coordinator: James Mergen

COURSE LIMITED TO A MAXIMUM OF 24 STUDENTS

SESSION II

Ramkota Inn
Amphitheater I

FEDERAL OSHA HAZARD COMMUNICATIONS ACT COMPLIANCE

Registration Fee \$65.00

PART I

Tuesday, 12:30-2:30 p.m.

General Session: This Could Cost You The Shirt Off Your Back

PART II

Tuesday, 2:30-5:00 p.m. Wednesday, 8:00-12:00 noon

Title: Hazard Communication (Right to Know)

Description: To assist attendees in understanding the OSHA Hazard Communication Act, how it affects utilities and enables them to develop a Hazardous Communication Program including Material Safety Data Sheets, labeling and training.

Instructor: Judy Grant - Industrial Hygienist
Northern States Power Company

PART III

Wednesday 1:00-5:00 p.m.

Title: Hazardous Waste Disposal

Description: Upon completion attendees will be able to identify material which upon disposal is required as hazardous waste under the Resource Conservation Recovery Act.

Instructor: Cynthia R. Axness - Plant Regulatory Analyst
Northern States Power Company

SESSION II
(CONTINUED)

FED. OSHA HAZARD COMMUNIC. ACT COMPLIANCE

PART IV

Thursday, 8:00 A M. - 12 00 P M.

Title: PCB Regulatory Update

Description: Upon completion attendees will understand the major provisions of the PCB regulations. Special emphasis will be given to the new Cleanup Standard.

Instructor: Cynthia R. Axness - Plant Regulatory Analyst
Northern States Power Company

Coordinators: Dean Greer and Randy Dickerson

SESSION III

Ramkota Inn
Washington Room

TRANSFORMER CONNECTIONS

Registration Fee \$65 00

A 14 and a 1/2 hour workshop designed for apprentice linemen or for experienced linemen or servicemen who are willing to go through a refresher course seeking ideas for communicating and explaining electrical terms and transformer connections to employees that they may supervise

IT WOULD BE HELPFUL IF THE PERSON WHO REGISTERS COULD EXPRESS A PREFERENCE FOR : POLE-MOUNT TRANSFORMERS, PAD-MOUNT TRANSFORMERS OR MINIATURE SUBSTATIONS.

Please have participants indicate a preference on the registration form.

PART I

Tuesday, 12:30-2:30 p.m.

General Session: This Could Cost You The Shirt Off Your Back

PART II

Tuesday, 2:30 - 5:00 p.m.

Title: **Basic Electricity**

Description: This is a 1 1/2 hour segment of slides, demonstration, and lecture designed to give line personnel a non-technical, basic review of single - and three-phase power, and delta and wye connections. An hour will be devoted to becoming familiar with the miniature equipment, determining transformer polarity and transformer turns ratio. The class will then begin hands-on connections with miniature transformers.

PART III

Wednesday, 8:00-12:00 noon

Title: **Three-Phase Power**

Description: A one-hour lecture and three hours of hands-on experience energized miniature power banks and substations.

SESSION III
(CONTINUED)

TRANSFORMER CONNECTIONS

PART IV

Wednesday, 1.00-5:00 p m

Title: Sequence and Voltage

Description: An hour and a half lecture and demonstration, two hours hands-on experience making connections on miniature transformers to provide a specific sequence and/or voltage output

PART V

Thursday, 8:00-12:00 NOON

Title: Trouble-Shooting

Description: Three hours live hands-on experience solving typical power bank and substation service problems on miniature equipment
The instructor and supervisors will answer your questions and assist you in finding a solution to classroom exercises in trouble-shooting
One hour lecture on power factor

Instructor. Gordon Solee, Engineer Consultant

Instructor Assistants

Bob Endahl -	Otter Tail Power Company Canby, Minnesota
Gary Huisken -	Brookings Municipal Brookings, South Dakota
Chuck Meyer -	Northern States Power Company Sioux Falls, South Dakota
Richard Davis -	Northwestern Public Service Huron, South Dakota

Coordinators: Al Kubousek, Juell Chapman, and Andy Jensen

COURSE LIMITED TO A MAXIMUM OF 48 STUDENTS

SESSION IV

Ramkota Inn
Jefferson Room

Z.E.M.A.R. Regulator School

Registration Fee \$65.00

Description: Students will be rotated through work stations containing regulators and panels. Regulator types will include General Electric, Allis Chalmers, Siemens Allis, Siemens, and McGraw-Edison. Students here get an excellent opportunity to trouble shoot old and new types of controls and learn good trouble shooting techniques which can apply to other types of equipment.

PART I

Tuesday, 12:30-2:30 p.m

General Session: This Could Cost You The Shirt Off Your Back

PART II

Tuesday, 2:30 -5:00

Title: Theory and Operation

PART III

Wednesday, 8:00-12:00

Title: Application and Accessories

PART IV

Wednesday, 1:00-5:00

Title: Electronics and Trouble Shooting Procedures

PART V

Thursday, 8:00-12:00

Title: Hands-on Trouble Shooting and Questions and Evaluation

Instructor: Joe Robb, Z.E.M.A.R. Regulator School
Zanesville, Ohio

Coordinators: Bob Crawford
Richard "Slim" Rutschke

COURSE LIMITED TO A MAXIMUM OF 24 STUDENTS.

SESSION V

Ramkota Inn
Lincoln Room

ELECTRIC METERING

Registration Fee \$65 00

PART I

Tuesday, 12.30 - 2:30 P.M.

General Session This Could Cost You The Shirt Off Your Back

PART II

Tuesday, 2:30 - 5 00 P M. Wednesday 8:00 A.M - 5 00 P M

TITLE Basic Metering

Tuesday-Wednesday

Description: A 10-hour course designed for linemen or apprentice metermen with little or no metering experience. The course will cover fundamentals of a watt hour meter, name plate and register information, determining multipliers, selection of meters and sockets per installations, and review of CT and PT applications. Included in this course will be fundamentals, performance, programming, and software of electronic and 100% solid state meters.

Each student is required to bring to the course a meter any type of meter will work, i.e., single or polyphase (3 phase), old or new.

Thursday 8:00 A.M. - 12:00 noon

Description: Round table discussion on metering installations, problems, and conditions found in the field

Instructors: Kate Shiring - Westinghouse - ABB
Tom Polk - Westinghouse - ABB
Greg May - May Engineering Lab
Bill Cimperman - Wesco
Greg Guggenmos - Wesco

Coordinators Bruce Brunick and Ron Globke

SESSION VI

Ramkota Inn
Amphitheater II

ENGINEERING

Registration Fee \$65.00

PART I

Tuesday, 12 30-2 30 p m

General Session: This Could Cost You The Shirt Off Your Back
Exhibit Hall, Ramkota Inn

PART II

Tuesday, January 23 2:30 p.m. - 5.00 p m

Title T-2 Anti-Galloping Conductor--Design, Installation, and
Maintenance

Instructors: John E Primus
Primus Marketing Associates
Minneapolis, Minnesota

Bob Martin
Field Service Engineer
ALCOA
Vancouver, Washington

Description The course will include a study of the design features of T-2 conductor and its performance under conditions typically conducive to galloping and aeolian vibration. Effects on overhead line design will be analyzed, and test data and field experience will be presented. Some time will be devoted to installation techniques and equipment needs, and maintenance requirements will be addressed.

SESSION VI
(CONTINUED)

ENGINEERING

PART III

Wednesday, January 24 8:00 a.m. - 12 00 noon

Title: Lightning Protection

Instructor: J. David Lankutis, P.E.
Engineering and Operations Manager
San Miguel Power Association
Nucla, Colorado

Description: The course will include a study of an explanation of lightning phenomena, how a lightning arrester works, selecting the proper arrester, proper installation and grounding of arrestors, and dissipation array systems.

PART IV

Wednesday, January 24 1.00 p.m. - 3 00 p m

Title The Analysis of Electric Insulating Fluids as Related to Transformer Operation

Instructor Jeffrey D. Jung
Laboratory Director
T & R Service Company
Colman, South Dakota

Description. The dielectric properties of insulating fluids and efficient heat transfer in electrical transformers are dependent on the condition of the insulating fluids. There are several tests that are used to determine the quality of the fluids. These tests and their relation to the operation of transformers will be discussed.

Dissolved gas analysis of transformer oil is vital in predicting transformer faults before they become catastrophic. By use of several diagnostic tools, the location, type, and extent of the fault can be determined. Several case histories will be discussed.

SESSION VI
(CONTINUED)

ENGINEERING

PART V

Wednesday, January 24 3:00 p m. - 5:00 p m

Title Automating Mapping and Record Keeping

Instructor: R.S (Rob) Scrivner
Project Manager
Stanley Consultants
Englewood, Colorado

Outline. Utility information requirements are becoming more and more complex Today's competitive environment is the driving force to streamline operations and reduce investment This effort combined with the renewed concern for protecting the environment has created an information explosion. One proposed solution to effectively handling the information is to automate the record keeping system

PART VI

Thursday, January 25 8:00 a m. -12.00 noon

Title: Transformers: Design, Sizing, Losses

Instructor Walt Jones
Project Manager
Stanley Consultants
Englewood, Colorado

Description. The course will include a study of current manufacturing methods and techniques; sizing transformers for loads, including discussion of diversity factors, power factor, temperature rise, etc ; losses in power and distribution transformers; preparation of specifications to compensate for transformer losses; and loss penalties

Coordinators. Rick Kirschenmann
John Wheeler

SESSION VII

Ramkota Inn
Roosevelt Room

OPERATIONS AND SAFETY

Registration Fee \$65

Part I

Tuesday 12:30-2:30

General Session: This Could Cost You The Shirt Off Your Back
Exhibit Hall, Ramkota Inn

Part II

Tuesday 2 30 -5 00

Title: Grounding

Description: Two-point equipotential temporary protective
grounding - an acceptable alternate to present grounding systems

Instructor: Jim Fox, A.B. Chance Company, Maple Lake, Minnesota

Part III

Wednesday 8.00-12:00 noon

Title Chain Saw Safety

Description Safety concerns; chain saw functions and maintenance,
cause, effect and prevention of kick-back; and protective equipment

Instructor: Alex Bildeaux, Jr., Tilton Equipment Company, St Paul, Mn

PART IV

Wednesday 1:00-5 00 p m

Title: U.R.D. Component Applications

Instructors: *Eric Thoreson*, Applications Engineer
Border States
Plymouth, Minnesota
Jerry Yakel, Applications Engineer
Cooper Power Systems, Chicago, Illinois

SESSION VII
(continued)

OPERATIONS AND SAFETY

PART V

Thursday 8:00-9:00

Title: Rigging with Cable, Chains, Rope

Description: Proper installation and use of cable and rope slings and chain.

Instructor: Bill Peterson, Dakota Riggers
Sioux Falls, South Dakota

PART VI

Thursday 9:00-10:30

Title : Cotton Clothing and Personal Protective Equipment

Description: Care and maintenance of protective equipment, rubber gloves, etc

Instructor: Gale Tollefson, Otter Tail Power Company
Wahpeton, North Dakota

PART VII

Thursday 10:30-12:00 noon

Title: Care of Body Belts and Climbers

Description: Proper maintenance of belts and proper sharpening of climbers

Instructor: Roderick A. Paul
Fresco
Hopkins, Minnesota

Coordinators: Curt Goehring
Joe Halverson

SESSION VIII

Ramkota Inn
Harvest Room

CUSTOMER RELATIONS

Registration fee \$65

This 14 and 1/2 hour class consists of hands-on training of how to deal with other people. It is specifically designed to deal with utility customers but will also help the participant communicate with spouse, children and people in general.

It is a hands-on practice type training class put together by Kaset, Inc. It is applicable to all classifications of employees but most helpful to those dealing directly one-to-one with customers.

PART I

Tuesday: 12:30 - 2:30 P.M.

General Session· This Could Cost You the Shirt Off Your Back
Washington Room - Ramkota

PART II

Tuesday · 2:30 P.M - 5:00 P.M.

Wednesday· 8:00 A.M. - 5:00 P.M.

Thursday· 8:00 A.M. - 12:00 NOON

Instructor: Randy Erickson, Black Hills Power and Light
Rapid City, South Dakota

Coordinator: Willy Haufschild

COURSE LIMITED TO A MAXIMUM OF 20 PEOPLE

JOINT UTILITY TRAINING COMMITTEE

Chairperson

Nancy Forkel, Black Hills Power and Light Department, Rapid City, SD

Vice Chairman.

Randy Dickerson, South Dakota Rural Electric Association, Pierre, SD

Secretary.

Bruce Brunick, City of Vermillion, Vermillion, SD

Treasurer:

Roger Nagel, South Dakota Rural Electric Association, Pierre, SD

South Dakota Electrical Council.

Pete Swanson (Liaison), Watertown Municipal Utilities, Watertown, SD

JUTS MEMBERS

South Dakota Rural Electric Association

Ron Globke, Turner-Hutchinson Electric, Marion, SD
John Wheeler, Butte Electric, Newell, SD
Rick Kirschenmann, Rushmore Electric, Rapid City, SD
Juell Chapman, Grand Electric, Bison, SD
Clarence Wattnem, Lincoln-Union Electric, Alcester, SD

Investor-Owned Electric Utilities.

Nancy Forkel, Black Hills Power & Light, Rapid City, SD
Al Kubousek, Otter Tail Power Company, Milbank, SD
Robert Crawford, Northwestern Public Service, Huron, SD
Willy Haufschild, Montana-Dakota Utilities Co., Moberg, SD
Dean Greer, Northern States Power Co., Sioux Falls, SD

Municipal Electric

Andy Jensen, Brookings Municipal Utilities, Brookings, SD
Jim Mergen, Sioux Falls Light Department, Sioux Falls, SD
Bruce Brunick, City of Vermillion, Vermillion, SD
Curt Goehring, City of Pierre, Pierre, SD

Generation, Transmission, Political Subdistricts, Statewide Association

Roger Nagel, South Dakota Rural Electric Association, Pierre, SD
Slim Rutschke, South Dakota Rural Electric Association,
Pierre, SD
Randy Dickerson, South Dakota Rural Electric Association,
Pierre, SD
Joe Halverson, East River Electric Power Cooperative, Madison, SD

The JUTS Committee would like to thank the following instructors and their companies for their participation in the the Fifteenth Annual Joint Utility Training Workshop. Without their involvement, this program would not be possible.

All instructors are cordially invited to breakfast at 7:00 a.m. on Wednesday, January 24 and Thursday, January 25 in the back Dorchester Room at the Ramkota Inn -- compliments of the JUTS Committee.

General Session:

Kyle Roberts Loss Control Coordinator
Tallahassee, Florida

Session I.

Jim Kellar Training Associates, Sioux Falls, SD

Session II:

Judy Grant Industrial Hygienist
Northern State Power Company

Cynthia R. Axness Plant Regulatory Analyst
Northern States Power company

Session III:

Gordon Solee Engineer Consultant
115 Mitchell Place
Fergus Falls, MN 56537

Bob Endahl Otter Tail Power Company
Canby, Minnesota

Gary Huisken Brookings Municipal
Brookings, SD

Chuck Meyer Northern States Power Company
Sioux Falls, SD

Richard Davis Northwestern Public Service
Huron, SD

Session IV.

Joe Robb Z.E.M.A.R. Regulator School
Zanesville, Ohio

Session V:

Kate Shiring Westinghouse Electric Corp.

Tom Polk Westinghouse Electric Corp.

Greg May May Engineering Corp.

Session V (continued)

Bill Cimperman	Wesco Sioux City, Iowa
Greg Guggenmos	Wesco Sioux City, Iowa

Session VI

John E. Primus	Primus Marketing Associates Minneapolis, Minnesota
Bob Martin	Field Service Engineer ALCOA Vancouver, Washington
J. David Lankutis, P.E.	Engineering and Operations Manager San Miguel Power Association Nucla, Colorado
Jeffrey D. Jung	Laboratory Director T & R Service Company Colman, South Dakota
R.S. (Rob) Scrivner	Project Manager Stanley Consultants Englewood, Colorado
Walt Jones	Project Manager Stanley Consultants Englewood, Colorado

Session VII:

Jim Fox	A.B. Chance Company Maple Lake, Minnesota
Alex Bildeaux, Jr.	Tilton Equipment Company St. Paul, Minnesota
Eric Thoreson	Applications Engineer Border States Plymouth, Minnesota
Jerry Yake1	Applications Engineer Cooper Power Systems Chicago, Illinois
Bill Peterson	Dakota Riggers Sioux Falls, South Dakota
Gale Tollefson	Otter Tail Power Company Wahpeton, North Dakota
Roderick A. Paul	Fresco Hopkins, Minnesota

Session VIII:

Randy Erickson	Black Hills Power and Light Rapid City, South Dakota
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15th Annual
Joint Utility Training School
January 23, 24, and 25, 1990
Ramkota Inn - Sioux Falls, SD

Registration Fee
for all the sessions is \$65.00 per student. PREPAID

- I. LEADERSHIP SEMINAR - 24 Maximum
- II. HAZARD COMMUNICATIONS
- III. TRANSFORMER CONNECTIONS** - 48 Maximum
- IV. Z.E.M.A.R. REGULATOR SCHOOL - 24 Maximum
- V. ELECTRIC METERING
- VI. ENGINEERING
- VII. OPERATIONS AND SAFETY
- VIII. CUSTOMER RELATIONS - 20 Maximum

Some sessions have limited enrollment, so make your reservations as soon as possible.

Please submit this form with registration. Make checks payable to Joint Utility Training School. Refunds and changes in registration will be allowed to January 5th. Send check and registration form to: South Dakota Rural Electric Association, Box 1138, Pierre, SD 57501.

**Session III. It would be helpful if the person who registers for this workshop could express a preference for. a) Pole Mount Transformers, b) Pad-Mount Transformers, or c) Miniature Substations.
10 hours (other credits) will be given for continuing education with the State Electrical Commission.

***15th Annual
Joint Utility Training School
January 23, 24, and 25, 1990
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- VII. OPERATIONS AND SAFETY
- VIII. CUSTOMER RELATIONS - 20 Maximum

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**** Session III** It would be helpful if the person who registers for this workshop could express a preference for A-Pole-Mount Transformers, B-Pad-Mount Transformers or C-Miniature Substations.

10 hours (other credits) will be given for continuing education with the State Electrical Commission.

