



Joint Utility Training School

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Training Today for Tomorrow

39th Annual

Joint Utility Training School

January 21,22,23, 2014

Ramkota Inn - Sioux Falls, SD

**38th Annual
Joint Utility Training School
January 21, 22, 23 2014
Ramkota Inn, Sioux Falls, SD**

REGISTRATION FEE
\$200 per student – PREPAID

GENERAL SESSION

1. WORKING WITH THE DIFFERENCES IN PEOPLE
2. TRANSFORMER CONNECTIONS
3. OPERATIONS AND SAFETY
4. FIELD OPERATIONS/TECHNICAL SUPPORT
5. SIEMENS REGULATORS
6. MANAGING RISK IN THE UTILITY INDUSTRY
7. SUBSTATION MAINTENANCE
8. COMPUTER TECH COURSE
9. ELECTRICAL CODE CLASS

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

Please submit registration form with payment.

Make checks payable to: **Joint Utility Training School.**

Refunds and changes in registrations will be allowed to January 11, 2014.

Send check and registration form to: **JUTS, ATTN: JAY, 101 N 3rd St. Beresford SD 57004.**

SESSIONS PROGRAM INFORMATION

Each session is designed as a 12-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. Certificates will be sent to your respective company if attendance has been continuous.

To obtain continuing education credit for sessions that qualify, a copy of your completion certificate must be sent to: SD Electrical Commission, 308 S. Pierre St, C/O 1320 E. Sioux Ave. Pierre, SD 57501.

REGISTRATION

Tuesday - January 21, 2014

12:00 a.m. to 1:00 pm.

\$200 per person

Pre-paid registration will include: Vendor Show Tuesday from 5:00 to 7:30 P.M., Breakfast on Wednesday and Thursday morning at 6:30 a.m. - 7:30 a.m. in the Exhibit Hall and a noon meal on Wednesday in the Exhibit Hall.

LUNCHEON

Wednesday - January 22, 2014 12:00 noon to 1:00 p.m.

Mini-courses will be:

Tuesday General Session 1:15 p.m.-5:00 p.m.

Wednesday 8:00 a.m.-5:00 p.m.

Thursday 8:00 a.m.-12:00 noon

GENERAL SESSION

Washington Room

Tuesday, January 21,
1:15 p.m. to 5:00 p.m.



Todd Heitkamp is the Warning Coordination Meteorologist for the National Weather Service (NWS) in Sioux Falls, SD. He received his Meteorology Degree from the University of Wisconsin at Madison in 1986. He began his career with the National Weather Service in 1987 holding positions in Waterloo, IA and Denver, CO before accepting his current position, the Warning Coordination Meteorologist, in Sioux Falls in 1994. He has received two Department of Commerce's Bronze Medals for his work in the development of NWS safety brochures, as well as his public outreach activities. He also received a NWS Modernization Award for product development. He has been married to wife Roxanne for 28 years and they have three children - Courtney, Nick, and Josh.



Holly Hoffman was born and raised in Eureka, South Dakota. After graduating from Eureka High School, she attended Northern State University. She and her husband, Charlie, manage a cattle ranch in north central South Dakota. Charlie also serves as a Representative in the State Legislature.

They raised three children who all attended South Dakota Universities. Austin, their oldest son, graduated from South Dakota State University and is now attending Law School at the University of South Dakota. Austin and his wife Megan reside in Brandon, South Dakota.

Alexandra Hoffman graduated from South Dakota State University with a Broadcast Journalism degree in May, 2011. She and her husband John live in Omaha, Nebraska, where she is employed with KETV. Alex was Miss South Dakota Teen USA in 2006 and Miss South Dakota 2008. She placed in the top 15 in the Miss America Pageant.

Elizabeth graduated from the University of South Dakota with an English degree and an emphasis in pre-medical studies. She is now attending the Sanford School of Medicine in Vermillion, South Dakota, and plans on being an Obstetrician-Gynecologist. Elizabeth was Miss South Dakota Teen USA in 2008.

After raising their children Holly decided it was time to do something for herself, so she applied to be on the reality show Survivor and made it. She was on Season 21 in Nicaragua. She was the last woman standing, and last member of the Espada Tribe in the game.

Holly is now traveling throughout the United States making appearances and speaking to various organizations and schools. By sharing her Survivor experience she has become a motivational speaker. She will also be traveling throughout the United States attending reality fundraising events and speaking. Holly is the author of "Your Winner Within".

Twitter @HollyHoffmanS21
Website HollyHoffman.org

Coordinator: Terry Ebright

SESSION I

CONFERENCE ROOM 3

WORKING WITH THE DIFFERENCES IN PEOPLE

General Session

Tuesday January 21, 1:15 pm – 5:00 pm

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

Thursday, 8:00 a.m. - 12:00 noon

Why We Are Different and What To Do About It

People are different...customers, managers, crews, we are all different in some unique ways. It is important to understand the differences we encounter within our teams at work. Even though we have people who are very different, it is still important to manage performance and behavior in a fair and even-handed manner regardless of differences in age, etc. Therefore, it is important to understand why we do the things we do and what a team member or manager can do about those. This session will be very interesting and will deal with the following issues:

The Differences in People...what differences should we be concerned with?

The Differences in People...how can we make those differences work for us in our teams?

The Differences in People...how do we understand the importance of those differences?

How do we manage differences in a way that satisfies staff, is legal, and produces the best results?

How to work with and manage people whose ages are different from yours.

How to help people perform better despite our differences.

Topics and Agenda

Understanding Yourself

Before we can understand others, we must become more self-aware. Understanding why we are the way we are and why

We think the way we do is the first giant step in learning to understand and appreciate the differences in people. Why are you the way you are and what those differences mean for you as a team member, family member, parent, etc. are important topics in any service environment, team environment, or business that depends on engagement with others.

Understanding How People are Different

Individual differences with each person who with us impact our work, and affects what to do about the differences. This part of the session includes a short learning instrument that shows how people are different and explains the "why" behind the differences we encounter in attitudes and behaviors.

Working with the differences in people in a Service Industry

Managing from the middle

Managing teams and people who are older than you

Managing people who are younger than you

Managing difficult employees



Jim Kellar provides consulting and training resources for people and businesses throughout the Midwest. He helps organizations and individuals design and implement solutions that meet specific goals and are sustainable over time.

Jim provides training and coaching in Performance Management, Mentoring, Teambuilding, Managing Change, and Customer Service. He helps organizations develop and implement long-term strategies to deal with retention, succession planning, and professional development.

Jim is an innovative retreat leader. Some of his retreats involve going to rustic settings in the woods or by a river, eating gourmet food, and using outdoor activities as a foundation for learning. These Unique Retreats™ are as intriguing and as useful to organizations and individuals as the retreats he conducts in traditional corporate settings. In the recent past, retreats have addressed Strategic Planning, Change Planning, Stress Management, and Management Teambuilding. Jim also facilitates large group planning and problem solving through Negotiated Rule Making.

Jim lives and works in Sioux Falls, SD. In his leisure, Jim indulges his passion for the outdoors. He can often be found kayaking a river, snorkeling, hunting, snow shoeing, hiking with his dogs, or camping with friends...or he may be conducting a training session out there.

Course limited to 30 Participants

INSTRUCTOR: JIM KELLAR

COORDINATOR: John Larsen

SESSION II

Washington Room

TRANSFORMER CONNECTIONS

A 12-hour workshop designed for apprentice lineman or for experienced linemen and servicemen who are willing to go through a refresher course seeking ideas for communicating and explaining electrical terms and transformer connections to employees whom they may supervise. The workshop experience will be valuable to senior linemen who did not have the opportunity to learn the trade at a lineman's school. A pocket calculator would be helpful in determining the anticipated voltage.

General Session

Tuesday January 21, 1:15 pm – 5:00 pm

PARTS I AND II

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

Description: This part will discuss basic three-phase systems. We will work with some basic phasor diagrams and try to explain the relationship of the phasor to the transformer itself. We will also make transformer connections with miniature equipment.

Description: Recognizing that the majority of work done with transformers is for single-phase loads, we will begin with basic transformers. This will include turns ratios, polarities, calculations, connections, and troubleshooting. We will use lecture, open discussion, and hands-on connection with miniature equipment.

PART III

Thursday, 8:00 a.m. - 12:00 noon

Description: We will continue to build miniature transformer banks and work on troubleshooting. We will also discuss motor rotation as it related to three-phase systems, as well as discuss ways to prevent voltage surges during switching a three-phase bank.

Scott Meinecke trained and worked as an electrician prior to his 1984 graduation from the Powerline Program at Northwest Iowa Community College in Sheldon. Scott was employed as a lineman with Iowa Lakes Electric Cooperative in Spencer Iowa and later at their service center in Pocahontas, Iowa Scott has an AAS degree in Powerline Technology and joined Northwest Iowa College in 1989 as an Instructor in the Powerline Program. Scott continues to teach a wide variety of topics, both classroom and hands-on from pole climbing to equipment operation to substation, etc. He is well known for the hand-on Transformer Workshop taught throughout the Iowa-Minnesota-South Dakota region.

Instructor: Scott Meinecke - Northwest Iowa Community College, Sheldon, IA

Supervisor: Ken Booze - East River Electric, Madison, SD

Coordinators: Gary Clayton
Rodney Haag

4 Non-Code credit hours will be given by the State Electrical Commission.

SESSION III

Lincoln Room

OPERATIONS AND SAFETY

General Session

Tuesday January 21, 1:15 pm – 5:00 pm

PART I

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

Instructor: Doug Kirkus

Doug serves as the Loss Control Administrator for the South Dakota Public Assurance Alliance and the SDML Workers' Compensation Fund. These 2 risk-sharing pools provide liability and worker's compensation coverage for just over 500 local governmental entities in South Dakota. Doug has been working with the Pools for the past 19 years. Prior to that Doug worked in law enforcement for 21 years as a Patrol Officer, Deputy Sheriff, Chief Deputy Sheriff and Chief of Police. Doug was an EMT for 25 years and an EMT instructor for 20 years. He also served many years as a Deputy County Coroner for Davison and Hanson counties. Doug is a certified defensive driving instructor through the National Safety Council.

Description:

When you are not focused on driving that decision can be the difference between life and death to you, your passengers and anyone else on the road. Distractions come in various forms so we will be discussing some of the more common distractions motorists face today. This session will focus on the importance of making safe and legal decisions when it comes to driving and dealing with distractions. We will be reviewing information from some of the most recent studies dealing with distracted driving. Hopefully everyone that attends this session will leave with a better understanding and appreciation of the dangers from distracted driving and the importance of giving driving your undivided attention.

Instructor: Bob Hall

Bob began his electric utility career in 1995. He worked as a journeyman lineman for a Rural Electric Cooperative in Indiana before joining Buckingham. He is currently the Central Region Manager with Buckingham.

Instructor: Roger May

Roger May is Sales Director for Utility Solutions Inc with product responsibility throughout the United States but also across all export markets. Utility Solutions is a designer and manufacture of Hot Line Tools located in Hickory, North Carolina. Many of Utility Solutions products come directly from the field thus we say we are "Lineman Driven / Field Proven." Roger has been with Utility Solutions for 1 1/2 years after completing 12 years within the Specialty Battery industry.

Description:

This course will cover the safe operational procedures for using, maintaining and testing various tools such as the Breaksafe Load Break and Load Pick Up tool, the XLT LoadRanger load break tool, the Jack Jumper Cutout Bypass tool, the Meter Grabber meter removal and installation tool as well as use and care of Fiberglass Hot Sticks.

Instructor: Todd Kerr, President – Power Line Sentry, LLC

After completing his post-graduate work in International Business, Todd spent 20 years leading companies in high-tech, manufacturing, and investment banking industries. He finds his current role as President of Power Line Sentry especially rewarding because the company's products not only provide wildlife protection but also minimize power fluctuations for the world's infrastructure. Todd believes the electrical grid will become the core for all energy distribution no matter the source and Power Line Sentry will strive to assist utilities in protecting this most valuable asset while also preserving our wildlife at the same time.

Description:

Fundamentals of Wildlife Mitigation for Distribution and Transmission Structures

This course walks participants through the laws governing wildlife protection and the steps Utilities are required to take to mitigate their systems. Current practices are explained including unique techniques for different species to minimize outages and electrocutions.

PART II

Thursday 8:00 a.m. – 12:00 p.m.

Beating the Odds

Tree work, particularly in relation to line clearance, continues to be near the top of high-risk professions despite our advancements in techniques and equipment. Surprisingly to many electrocution is not the highest risk to line clearance tree trimmers as many more accidents occur during felling, pruning and chipper as well as driving between sites. This session will provide an overview of the accidents that occurred in 2006 but more important - how to avoid them!

Instructor: John Ball
SDSU



John Ball is a Professor of Forestry at South Dakota State University where he conducts research on tree worker safety as well as instructs courses in arboriculture. He has published the research in a wide range of journals and trade publications including *Arboriculture & Urban Forestry*, *Arborists News* and *TCI* and has made presentations in more than 40 states. John previously managed tree care companies in the Midwest and New England.

4 Non-Code credit hours will be given by the State Electrical Commission.

Coordinators: Ken Meirose
Scott Wiese

Session IV

Amphitheater II

Field Operations / Technical Support

Part I

Tuesday 1:15pm – 5:00pm

Title: General Session

Part II

Wednesday 8:00am-5:00 am: Amphitheater II

Jan 22nd 8:00-2:00

- Principals of a transformer
- Transformer sizing
- Transformer Fusing Options
- Switching Options
- Key standards
- Loss Methodology
- Amorphous Core vs GOS
- The value of Natural Ester Fluids
- Are all transformers created equal

ABB and Power Partners

Jan 22nd 2:00-5:00

Title: Safety and Reliability Factors for Distributed Generation Plants

Introduction to the different types of distributed generation, wind, PV, anaerobic digesters and cogeneration. Main issues with rotating machines and inverters have on our distribution system will be presented. Mr. Ropp will bring facts on how likely are we to see any of them in our region? The standards and certifications requirements by IEEE and UL will be discussed. Mr. Ropp's presentation will be informative and beneficial in keeping our distribution system safe and reliable.

Michael Ropp, PhD, PE
President and Principal Engineer
Northern Plains Power Technologies

Part III

Jan 23rd 8:00 am-noon

Title: Applying State Law to Road Moves

Description: This presentation will give an overview of how newly enacted State Laws apply to Road Moves. Dave will give examples of best practices used during utility coordination and show how the utility owner can benefit from State Law through that coordination effort.

(State Laws being addressed are SDCL 31-19-1.1, SDCL 31-26-23 and SDCL 31-26-23.1)

Title: Plans Reading Course

Description: This course was designed for utility companies and will teach the basics of reading highway construction plans. It will explain the different views depicted in a set of plans, how to measure both horizontal and vertical distances and how to understand field markings.

Dave Hausmann- SDDOT

Course Coordinators: Bruce Brekke
Brad Wenande

SESSION V

Jefferson Room

SIEMENS REGULATORS

Please bring a lap top computer

General Session

Tuesday January 21, 1:15 pm – 5:00 pm

PART I

SIEMENS REGULATORS

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

PART II

Thursday, 8:00 a.m. - 12:00 noon

Siemens Energy, Inc.

VOLTAGE REGULATORS

The Regulator College of Knowledge was developed over a period of 40 years. It is designed to increase the knowledge of personnel responsible for handling, installing and maintaining single phase voltage regulators. The program consists of classroom training (various control panel and regulators operations) and hands-on instruction. Topics included to be covered are voltage regulator construction; control panel set-up: MJ-3A, MJ-X and MJ-XL; trouble shooting controls and regulators; and installing and bypassing.

Topics include:

- * Regulator Product Presentation
- * Introduction to Voltage Regulators
- * By-passing Regulators
- * Regulator Construction, Tap Changer Operation
- * Nameplates and Control Diagrams
(Straight & Inverted Designs)
- * Troubleshooting/Hands on & Discussion
- * and much more

Instructor: Court Hode

Thursday, 8:00 a.m. - 12:00 noon

PART II

*FUUSE SAVERS

Instructor: Marc Loa

*DISCONNECTS

Instructor: Brock Hill

Coordinators: Ken Van Zee
Dale Henderscheidt

SESSION VI

Roosevelt Room

"Managing Risk In The Utility Industry"

General Session

Tuesday January 21, 1:15 pm – 5:00 pm

Security Consideration For The Utility Industry

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

Thursday, 8:00 a.m. - 12:00 noon

Managing Risk In The Utility Industry

Risk is inevitable. How much risk is acceptable? This presentation examines risk from a utility perspective. Topics will include:

- Meth Lab recognition
- Active shooter preparations and survival
- Organized crime recognition and avoidance (Includes "Gang chart")
- Driving security considerations
- Building, perimeter and parking lot security
- Avoiding and de-escalating confrontations
- Reducing theft(s) (Power and/or materials)
- Security assessments
- IED's and Bomb threat recommendations
- Identity theft avoidance and prevention
- Workplace violence avoidance recommendations
- Top "10" list of security considerations

This fast paced, audience interactive presentation will provide you with the cost effective "tools" required for your on-going security efforts. Attend this presentation and experience why thousands of participants from hundreds of utilities consider this a "must see" program!

Instructor: Stefan Salmonson, President - PROtective Services, Inc. Mora, MN

SPEAKERS BIO ...

Your presenter, Stefan V. Salmonson, is the president of **PRO**tective Services, Inc. He is a licensed deputy sheriff/tactical trainer, licensed private detective, licensed protective agent, certified personal protection specialist (Body Guard), international security consultant, experienced tactical specialist, contract government investigator (with security clearance), airline transport pilot and professional speaker. **PROS** provides executive and personal protection services, high-risk employment termination support services, discrete investigations,

security presentations, training, keynote presentations, security assessments, consulting and risk management recommendations for several hundred clients.

Optional Information:

Stefan writes security related articles for publications and is frequently interviewed by journalists regarding security concerns. Clients include national/international corporations, government agencies, foreign royalty, public utilities, school districts/student transportation, flight department/associations, prisons, hospitals, financial institutions, media, the trucking, real estate and insurance industry.



Stefan V. Salmonson, PPS

PROtectivE Services, Inc.
209 East Maple Avenue, Suite 5
Mora, Minnesota 55051

Office: 320-679-4848

Cell: 612-961-5867 (24/7)

E-Mail: Stefan@PROtectiveServciesinc.net

WEB: WWW.PROtectiveServicesinc.net

Stefan V. Salmonson, PPS, President

Coordinators: Terry Keller
Doug Enstad

SESSION VII

Crystal Room

SUBSTATION MAINTENANCE

PART I

GENERAL SESSION

Tuesday, January 21, - 1:15 p.m. - 5:00 p.m.

PART II

Title: Substation Maintenance

Wednesday, January 23, 8:00 a.m. - 5:00 p.m.

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

Description: This class is meant to give a good foundation on the knowledge of substation equipment, operation and maintenance practices.

The class will cover as much ground as possible, including detailed discussion about all substations equipment. All efforts will be made to gear the class to your specific needs.

TOPICS INCLUDED ARE:

- Safety Considerations
- Specific hazards of the substation
- Apparatus
- Review of major substation equipment design and deployment
 - Station One Lines
 - Bus configuration
 - Switching Equipment
 - Transformers
 - Voltage Control
 - Protection and Automation
- Operation and maintenance
 - Substation Switching
 - Equipment and maintenance

SPEAKERS BIO ...

Gary Roskos has worked in the utility industry for more than 28 years, starting as an engineering intern with Northern States Power in 1983. During his 20 years with NSP and Xcel Energy, he gained experience in the following areas:

- Substation Design and Construction
- Protective Relaying
- System Analysis and Reliability
- Electric System Maintenance and Troubleshooting
- Metering
- Distribution Construction and Trouble Operations

Upon leaving Xcel Energy at the end of 2002, he worked for Open Systems International, Inc., a leading provider of SCADA/EMS systems, helping with product development and project management for projects throughout the world.

In 2006 he spent time with Cooper Power Systems/Cannon Technologies working on product development and product management in the areas of substation monitoring and distribution automation.

He started his own consulting company in 2008 and continues to work on substation design and electric system automation projects throughout North America.

He holds a Master's Degree in electrical engineering from the University of Minnesota, with an emphasis in power systems operation and analysis.

Coordinators: Corey Gunderson
Rodger Krom

SESSION VIII

Amphitheater I

Computer Tech Course

GENERAL SESSION

Tuesday, January 21, - 1:15 p.m. - 5:00 p.m.

January 22, 2013 Wednesday

8 AM to 12PM or 4 hrs

Title: Milsoft Utility Solutions - Engineering & Operations in the Smart Grid

Instructor:

Steven E. Collier

Vice President, Marketing & Business Development

Milsoft Utility Solutions

Outline of Topics to be Covered:

Introduction and Objectives of the Session

Smart Grid Basics

Why Is A Smart Grid Important?

Problems with the existing electric utility grid

New challenges for the electric utility grid in the future

New and emerging technologies make a smart grid inevitable

What Is a Smart Grid?

Distributed Intelligent Electronic Devices

Two-Way, Broadband, Digital Communications

Operating Platforms

How Should a Smart Grid Be Deployed?

The Importance of Integration & Interoperability

The Importance of Public Telecom Networks

The Importance of the Internet

The Importance of a Technology Strategy

The Role of Dis-intermediaries

Engineering & Operations in the Smart Grid

Engineering Analysis and Planning

Outage Management Systems

Geographic Information Systems

Customer and Employee Communications

Conclusions and Recommendations

Wednesday
1 PM to 3 PM or 2hrs

General Information Systems (GIS)

Instructors:

Kendis Scharenbroich and Brandon Crissinger

*From: **Pro-West & Associates Inc.** - Geographic Information System Specialists*

Outline of Topics to be Covered:

1. GIS & Utilities Overview
2. GIS Software and applications overview
3. Building a GIS database
4. GPS data collection
 - a. Hardware options
 - b. Accuracy Standards
 - c. Correction options
 - d. Integration with GIS
5. GIS-based Utility applications

Wednesday
3 PM to 5PM

Title: Practical tips and tricks for effective GPS data collection

Instructor:

Kyle Burdine
Del Stewart |

Frontier Precision, Inc.

Outline of Topics to be Covered:

Description:

In this session, we will provide an overview of how electric utilities are incorporating the latest technologies to increase efficiency:

- GPS for construction stakeout, asset inventory and maintenance
- GPS for Field Service Management applications including work management efficiency, vehicle diagnostics, driver safety and compliance
- Handheld Lasers for remotely measuring pole height, vegetation clearance and conductor clearance over a roadway

January 23, 2013 Thursday
8AM to 10AM 2hrs

Title:
Line Design and Engineering Ethics

Presenters: Ted Dimberio, P.E.

Biography

Ted Dimberio, P.E. has worked for two rural electric cooperatives for 26-years in the areas of field design, supervision and management. Ted was one of the few staking engineers in the country performing field design while holding a professional engineering license. Ted was also a consulting engineer for 8-years and performed work order inspections for 12 rural electric cooperatives and engineering projects in nine states.

Ted is currently President & CFO of Utility Line Design and President of Line Design University. The emphasis of these companies is to provide the line design tools and education to improve the line design environment. Ted is a professional engineer in the states of Minnesota and Wisconsin.

Line Design and Engineering Ethics

Most engineering procedures utilized in the utility environment have been developed from previous generations. In essence, utilities believe they are using correct procedures when designing overhead power lines. However, the question has to be asked “Are we doing the right things, and are we doing the right things, right?” This section explores the current engineering environment and the philosophy several utilities will be taking in the near future to enhance engineering and reduce corporate liability.

Topics in this section will include:

- Line Design Environment
- Civics and State Registration Law
- National Council of Examiners for Engineers and Surveyors
- Two Unethical Case Studies
- Line Design Best Practices
- Line Design Technician Career Path
- RUS vs State Comparison
- Project Penalties
- Engineering Compliance
- Engineering Model

South Dakota Chapter 36-18A

South Dakota Chapter 36-18A describes the engineering and registration requirements for professional engineers and corporations. This program will review each section of South Dakota Chapter 36-18A. Participants will gain knowledge on definitions, board of engineering structure, sealing projects, corporate Certificate of Authorization, exemptions, unauthorized use of statute and penalties.

NISC/Partner Software/Future Systems Staking Sheet Integration with Utility Line Design

Staking sheets lack sufficient documentation for a professional engineer to review and approve designs. Utility Line Design has a unique program where a responsible charge engineer can identify numerous Standards and Design Criteria based on the utilities system design. This information is integrated with a staking sheet and produces a profile drawing and engineering report on multiple calculations per span that is sufficient for the professional engineer to review and approve projects. The purpose of this program is to enhance the line design environment, obtain best practices in the line design environment, and reduce the engineers and utility exposure.

Engineering Manual

Documentation is essential to form a creditable engineering department and reduce utility exposure. During litigation, an expert witness can ask for documentation how engineering was performed on the accident and how engineering was performed in the surrounding areas. An Engineering Manual is a structured approach to document the engineering environment. The following is a typical list of sections that can be included in an Engineering Manual.

- Certificate of Authorization
- Describe line design calculations
- Standards and Design Criteria
- Procedures to obtain field information and ground elevations
- Local authority clearances
- Joint use procedures
- Complaint form
- Key contacts – state, county, railroad, telecom, city, transmission, DNR
- Design guidelines and internal engineering memo's
- Line design technician certification schedule
- Procedure to work as a group to improve software integration

Line Design Calculation Examples

Accurate sag and tension charts are required to perform most line design calculations. This program identifies how sag and tension charts are developed for overhead distribution lines and the step-by-step process to perform line design calculations.

Multiple Line Design Calculations in One Operation

Several line designs require multiple steps to determine NESC compliance. This section will demonstrate Utility Line Design's Pro Model website and the simplified approach to perform complicated line design calculations.

- Utility Line Design Pro Model Website
- Clearance Between Conductors
- Pole Length
- Grain Bin
- Clearance Along Existing Span
- Transmission Crossings

Coordinators: Mark Patterson & Tim Chance

SESSION IX

CONFERENCE ROOM 2

NATIONAL ELECTRIC CODE HOURS

8 Hours Code Credit

Each attendant needs to bring a Current NEC code book

GENERAL SESSION

Tuesday, January 21, - 1:15 p.m. - 5:00 p.m.

PART I

CONFERENCE ROOM 2

CODE CLASS

Wednesday, January 22, 8:00 a.m. - 12:00 p.m.

Instructor: Glen Janssen & Larry Kippas

Glen Janssen: Glen is a Beresford Graduate and still lives in the area. He started in the electrical business in the late 1960's. Glens knowledge and experience comes from working on a large variety of electrical jobs ranging from residential, commercial, industrial and power plants. Glen is a former State of South Dakota Electrical inspector.

Larry Kippas: Larry is a Marion native and will be assisting Glen with the code class. Larry is also a former State of South Electrical and now is the City of Sioux Falls Electrical Inspector.

PART II

Lincoln Room

Wednesday, January 22, 1:00 – 5:00

Instructor: Bob Hall

Bob began his electric utility career in 1995. He worked as a journeyman lineman for a Rural Electric Cooperative in Indiana before joining Buckingham. He is currently the Central Region Manager with Buckingham.

Instructor: Roger May

Roger May is Sales Director for Utility Solutions Inc with product responsibility throughout the United States but also across all export markets. Utility Solutions is a designer and manufacture of Hot Line Tools located in Hickory, North Carolina. Many of Utility Solutions products come directly from the field thus we say we are

"Lineman Driven / Field Proven." Roger has been with Utility Solutions for 1 1/2 years after completing 12 years within the Specialty Battery industry.

Description:

This course will cover the safe operational procedures for using, maintaining and testing various tools such as the Breaksafe Load Break and Load Pick Up tool, the XLT LoadRanger load break tool, the Jack Jumper Cutout Bypass tool, the Meter Grabber meter removal and installation tool as well as use and care of Fiberglass Hot Sticks.

Instructor: Todd Kerr, President – Power Line Sentry, LLC

After completing his post-graduate work in International Business, Todd spent 20 years leading companies in high-tech, manufacturing, and investment banking industries. He finds his current role as President of Power Line Sentry especially rewarding because the company's products not only provide wildlife protection but also minimize power fluctuations for the world's infrastructure. Todd believes the electrical grid will become the core for all energy distribution no matter the source and Power Line Sentry will strive to assist utilities in protecting this most valuable asset while also preserving our wildlife at the same time.

Description:

Fundamentals of Wildlife Mitigation for Distribution and Transmission Structures

This course walks participants through the laws governing wildlife protection and the steps Utilities are required to take to mitigate their systems. Current practices are explained including unique techniques for different species to minimize outages and electrocutions.

PART III
CONFERENCE ROOM 2

CODE CLASS

Thursday, January 23, 8:00 a.m. - 12:00 noon

Instructor: Glen Janssen & Larry Kippas

This class will get you 8 hours of approved credits for renewing your South Dakota state Electrical License's

Part I & Part III

4 Code credit hours will be given by the State Electrical Commission.

Part II

4 Non-Code credit hours will be given by the State Electrical Commission.

Course Coordinators: Mark Koller
Frank Doherty

Joint Utility Training Committee

Chairman: Doug Enstad – Watertown Municipal Utilities, Watertown, SD

Vice Chair: Ken Meirose – Black Hills Power, Sturgis, SD

Secretary: Terry Ebright – Sioux Valley Energy, Colman SD

Treasurer: Jay Nordquist – City of Beresford, Beresford, SD

South Dakota Rural Electric Association:

Ken VanZee – Douglas Electric Coop, Armour, SD

Tim Chance – Southeastern Electric Coop, Alcester, SD

Terry Keller – Cam-Wal Electric, Selby, SD

Roger Crom – SD Rural Electric Association, Pierre, SD

Terry Ebright – Sioux Valley Energy, Colman, SD

Rodney Haag - Oahe Electric, Blunt, SD

Investor –Owned Electric Utilities:

Scott Wiese – Otter Tail Power Co, Milbank, SD

Brad Wenande – Northwest Energy, Huron SD

Bruce Brekke – Montana-Dakota Utilities, Mobridge, SD

Ken Meirose – Black Hills Power, Sturgis, SD

Municipal Electric Utilities:

Dale Henderschiedt – Brookings Municipal Utilities, Brookings, SD

John Larsen – City of Sioux Falls, Sioux Falls, SD

Jay Nordquist – City of Beresford, Beresford, SD

Ginny Beck – Crooks Municipal Gas, Crooks SD

Mark Koller – City of Vermillion, Vermillion, SD

Generation, Transmission, Political Sub Districts, Statewide Association:

Frank Doherty – SD Rural Electric Association, Pierre, SD

Terry Ebright – Sioux Valley Energy, Colman SD

Doug Enstad – Watertown Municipal Utilities, Watertown, SD

Dave Zwetzig – Butte Electric Coop, Newell, SD

Gary Clayton – Rosebud Electric, Gregory, SD

Mark Patterson – SD Rural Electric Association, Wall, SD

Cory Gunderson – East River Electric Coop, Madison, SD

Vendors Association:

Tom Honkomp - WESCO