

**2001  
RURAL ELECTRIC POWER CONFERENCE**

**Papers Presented  
at the  
45th Annual Conference  
Little Rock, Arkansas**

**April 29 – May 1, 2001**

**Sponsored by**

**The Rural Electric Power Committee  
of the  
IEEE Industry Applications Society**

**of**

**The Institute of Electrical  
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# 2001 IEEE RURAL ELECTRIC POWER CONFERENCE

## Program Schedule

### Sunday, April 29, 2001

8:00 AM – 10:00 AM	<b>Registration Set Up (Committee)</b> Registration Desk
10:00 AM – 8:00 PM	<b>Registration</b> Registration Desk
10:00 AM – 4:00 PM	<b>Set Up Exhibits</b> Envoy, Consulate, Diplomat, Ambassador II and Hallways
3:00 PM – 4:30 PM	<b>Committee Business Meeting</b> Ambassador IV-VII
4:30 PM – 9:00 PM	<b>Vendor Display/Exhibitions</b> Envoy, Consulate, Diplomat, Ambassador II and Hallways
4:30 PM – 9:00 PM	<b>Reception</b> Hallway, Lobby Area

### Monday, April 30, 2001

6:00 AM – 9:30 AM	<b>Conference Breakfast Buffet</b> Made to Order Breakfast Bar
7:00 AM – 4:00 PM	<b>Registration</b> Registration Desk
8:30 AM – 9:30 AM	<b>Open Conference</b> Ambassador I and II Presiding: Alan Hannah, Chairman REPC Announcements – REPC Officers Keynote Address: Nick Brown, Vice President, Southwest Power Pool <b>“The Importance of Engineering in the Future of the Electric Utility Industry”</b>
9:30 AM	<b>Technical Session “A”</b> Ambassador IV – VII Moderator: Alan Hannah, Arkansas Valley Electric Co-op. Corp.
9:30 AM	<b>“Electric Deregulation Impacts on Metering, Billing and Customer Information Systems”</b> Robert H. McClanahan, Arkansas Electric Cooperative Corp.
10:00 AM	<b>Coffee Break</b> Hallway/Lobby Area

## **2001 IEEE RURAL ELECTRIC POWER CONFERENCE**

### **Program Schedule (continued)**

#### **Monday April 30, 2001 (continued)**

- 10:30 AM                    **Technical Session “A” (continued)**
- 10:30 AM                    **“Understanding the Potential Benefits of Distributed Generation on Power Delivery Systems”**  
Peter A. Daly, Power System Engineering, Inc.  
Jay Morrison, National Rural Electric Cooperative Association
- 11:00 AM                    **“Operating Conflicts for Distributed Generation on Distribution Systems”**  
Roger C. Dugan, Electrotek Concepts  
Thomas E. McDermott, Electrotek Concepts
- 11:30 AM                    **“The Nations Largest Fuel Cell Project, a 1 MW Fuel Cell Power Plant Deployed as a Distributed Generation Resource”**  
Steve Gilbert, Chugach Electric Association, Inc.
- 12:00 Noon                    **Lunch**  
Ambassador I and III
- 1:30 PM                      **Technical Session “B”**  
Ambassador IV – VII  
Moderator: Ed Thomas, Utility Electrical Consultants, PC
- 1:30 PM                      **“Power Quality Issues Relating to Power Line Carrier Automated Meter Reading Technology”**  
Cameron L. Smallwood, P.E., United Electric Cooperative Services, Inc.
- 2:00 PM                      **“Service Quality Measures for Motor Starting”**  
Robert J. Rusch, P.E., Stanley Consultants, Inc.  
Pamela L. Beavis, P.E., Stanley Consultants, Inc.
- 2:30 PM                      **“Written-Pole Motor® Eliminates Water Hammer on Irrigation and Municipal Water Systems”**  
Richard T. Morash, P.E., Precise Power Corporation
- 3:00 PM                      **Coffee Break**  
Hallway/Lobby Area
- 3:30 PM                      **“Overloading and Loss-of-Life Assessment Guidelines of Oil-Cooled Transformers”**  
P.K. Sen, Ph.D., P.E., Colorado School of Mines  
Sarunpong Pansuwan, University of Colorado at Denver
- 4:00 PM                      **“Advanced Transformer Paralleling”**  
E. Tom Jauch, Beckwith Electric Company, Inc.

**2001 IEEE RURAL ELECTRIC POWER CONFERENCE**  
**Program Schedule (continued)**

**Monday April 30, 2001 (continued)**

- 4:30 PM                    **Adjournment**
- 4:30 – 7:30 PM         **Equipment and Computer Exhibits**
- 5:00 – 7:00 PM         **Drinks and Snacks**  
Managers Reception Area

**Tuesday, May 1, 2001**

- 6:00 AM – 9:30 AM     **Conference Breakfast Buffet**  
Made to Order Breakfast Bar
- 7:00 AM – 4:00 PM     **Conference Registration**  
Registration Desk
- 8:30 AM                 **Technical Session “C”**  
Ambassador IV - VII  
Moderator: Daniel M. Brewer, Blue Grass Energy
- 8:30 AM                 **“Computer Applications in the Electrical Utility Industry”**  
Timothy G. Pittser, Ledbetter, Toth & Associates, Inc.
- 9:00 AM                 **“Successful System Design and Planning Using Distribution  
Analysis Software Programs”**  
Anandi De La Fuente, Magic Valley Electric Cooperative, Inc.  
Stuart Thomas, Magic Valley Electric Cooperative, Inc.
- 9:30 AM                 **“Common Interfaces for Enterprise Integration-Experience  
With NRECA’s MultiSpeak™ Specification”**  
Gary A. McNaughton, P.E., Cornice Engineering, Inc.  
Martin E. Gordon, P.E., National Rural Electric Cooperative Assn.
- 10:00 AM                **Coffee Break**  
Hallway/Lobby Areas
- 10:30 AM                **“Reliability of Poles in NESC Grade Construction”**  
H.J. Dagher, Ph.D., P.E., University of Maine
- 11:00 AM                **“Selection of Wood Pole Alternatives by Means of Present-  
Worth Analysis”**  
Mark S. Shaw, P.E., C.H. Guernsey & Company  
Dennis E. Snyder, P.E., C.H. Guernsey & Company

**2001 IEEE RURAL ELECTRIC POWER CONFERENCE**  
**Program Schedule (continued)**

**Tuesday, May 1, 2001 (continued)**

- 11:30 AM                    **Technical Session “C” (continued)**
- 11:30 AM                    **“Measurement of Wood Pole Strength - Polux® a New  
Non-Destructive Inspection Method”**  
Edward Ezer, Ph.D., Pole + Management, Inc.
- 12:00 Noon                    **Lunch**  
Ambassador I and III
- 1:30 PM                    **Technical Session “D”**  
Ambassador IV – VII  
Moderator: Walt Jones, Stanley Consultants, Inc.
- 1:30 PM                    **“Reconductoring Power Lines An Example Exercise in  
Conductor Selection”**  
Gordon C. Baker, General Cables Corporation
- 2:00 PM                    **“New Triple-Single Reclosers Improve Distribution Reliability”**  
Hari Singh, Cooper Power Systems  
Haijun Liu, Cooper Power Systems  
Dennis Waldner, Cooper Power Systems
- 2:30 PM                    **Evaluating Alternative Reliability Improvement Proposals  
Using the RIP Method”**  
Matthew H. Tackett, P.E., Tackett Electric Company, Inc.
- 3:00 PM                    **Coffee Break**  
Hallway/Lobby Areas
- 3:30 PM                    **“Autodaptive Volt/VAr Management System”**  
Mark Dixon, Beckwith Electric Company
- 4:00 PM                    **“Harmonic Analysis and Improvement of a New Solid-State  
Fault Current Limiter”**  
M.M.R. Ahmed, The University of Northumbria at Newcastle  
G.A. Putrus, The University of Northumbria at Newcastle  
L. Ran, The University of Northumbria at Newcastle  
L. Xiao, The University of Northumbria at Newcastle
- 4:30 PM                    **Door Prizes – “You Must Be Present to Win”**  
**Closing Announcements**  
**Conference Adjournment**

**2001 IEEE RURAL ELECTRIC POWER CONFERENCE**  
**Program Schedule (continued)**

**Wednesday, May 2, 2001**

**Tutorial on Upgrading Your Grounding Skills**

Sponsored by National Food and Energy Council

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**Tutorial on Proposed Changes to the 2002 NESC**

Sponsored by Clapp Research Seminars

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**Distribution Reliability Course**

Sponsored by Cooper Power Systems

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**PROCEEDINGS**

**IEEE CATALOG No. 01CH37214**

A bound copy of all the technical papers will be provided to each conference registrant. Additional copies of this year's proceedings can be purchased for U.S. \$20.00 from the IEEE Rural Electric Power Committee during the conference. Please contact the registration desk or any committee officer to order copies of the proceedings.

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