

IEEE Power Engineering Society Entity Annual Report 2003

Entity: Power Systems Analysis, Computing, and Economics Committee

Chair: Martin L. Baughman

NOTE: Please list all items in each section in the order of importance. To aid the editor in compiling the PES Annual Report, please provide sufficient description to be able to explain to a member or a member's employer why an accomplishment or benefit ought to be important to them.

Significant Accomplishments in 2003 (Please explain why these are significant and include details and examples):

At the 2003 General Meeting (recently held in Toronto July 13-17, 2003) and 2003 Transmission and Distribution Conference Exposition (held in Dallas, Texas September 7-12, 2003) the subcommittees organized and presented eleven paper and panel sessions. The sessions spanned topics related to:

- Tools and techniques for Market Monitoring
- The FGRs vs. FTRs Debate: Facts and Fiction
- Advances in Power Flow and Computation
- Multi-Agent Systems in Power Engineering
- Advanced Topics in Distribution System Analysis
- Component Modeling for Distribution System Analysis
- Demand-Side Participation in Markets
- Strategies for Bilateral and Pay-as-Bid Markets
- Distribution Modeling for Feeder Analysis
- Transmission Rights: Congestion and Pricing
- Advances in Unit Commitment

Benefits to Industry and PES Members from the 2003 Work (provide specific examples and explain what the benefits are):

The Committee serves as an information exchange for applications and a nexus for development of models, computational tools, and methods of analysis that apply to the various operational, planning, economic, risk, and uncertainty assessment, management and decision making problems in bulk power supply and distribution systems. This is done through initiating and coordinating studies, standards development, symposia, panel discussions and tutorials related to the subjects of the area, and coordinating these activities with other groups and committees of the Power Engineering Society.

Benefits to Volunteer Participants from the 2003 Work (provide specific examples and explain what the benefits are):

Opportunities to interact with interested professionals and other IEEE groups at the annual PES General Meeting on topics of mutual interest, including organizing and

offering tutorials on topics of special interest to the society, and creating task forces to write industry standards. Recent examples of tutorials include *Artificial Intelligence Applications in Fault Analysis* and *Modern Heuristic Optimization Techniques with Applications to Power Systems*. An illustrative standards activity is now underway to review and revise IEEE Standard 762,

Recognition of Outstanding Performance (include all award winners and their affiliations for which your area is responsible):

Committee Outstanding Service Award:

Joann V. Staron, Past Chair, PSACE

Committee Prize Paper Award:

Mark Enns, "Object-Oriented Sequence-Domain Representation of Transformers for Network Analysis".

Significant Plans for 2004:

Several new initiatives are being planned within the subcommittees. Some of these include:

- Developing a dictionary of standard market terms
- Organizing activities to study technical issues related to the power grid and homeland security concerns
- Preparing and sponsoring a tutorial on Power System Reliability
- Addressing different congestion management approaches for energy trading
- Taking new initiatives to the Working Group on Distributed Resource Modeling and Analysis.

Problems and Concerns:

Submitted by: Martin L. Baughman, Chair PSACE **Date:** February 2, 2002

To be submitted no later than January 17, 2004 to the PES Executive Office