

IEEE POWER ENGINEERING SOCIETY 2003 GENERAL MEETING PREVIEW

By Phill Feltham

This year, Toronto Hydro Corporation will host the IEEE Power Engineering Society's (PES) first Annual General Meeting in Toronto at the Sheraton Centre from July 13-17, 2003. More than 1000 practicing power engineers and academics from around the world will gather in Toronto to participate in four days of technical sessions, committee meetings, tutorials and technical tours. The aim of the conference is to share, and discuss various issues and developments in the field of electrical power engineering.

GENERAL AND TECHNICAL MEETINGS

IEEE PES's General Meeting gets an early start at 8:00 a.m. in the Grand Ballroom of the Sheraton. PES President John Estey kicks off the conference with a retrospective 'year in review' in power engineering and some valuable insight for the year ahead. There will be a question and answer period following Estey's opening remarks.

Toronto Hydro's President and CEO Courtney Pratt, 3M Electrical Products Division's VP Paul Steece and Research in Motion's Chairman and Co-CEO Jim Balisillie will host the Plenary Session, immediately following the General Meeting. The topic of discussion will be the IEEE PES's conference theme for this year, "Empowering ideas and transforming leading edge thinking into practical solutions."

SESSION HIGHLIGHTS

The conference will delve into the latest issues and developments in the field of electrical power engineering in a series of workshops being offered.

The topics for this year's conference fall into five key categories: Asset Management; Risk Management; Telecommunication, Information and Control; Industrial Power Distribution; and Developments in Power Engineering Technologies.

Some leading subject areas in these categories include:

Asset Management:

- power system planning and operations
- distribution lightning performance
- power system planning in an evolving regulatory environment
- bulk power system planning and operations in a deregulated market

Risk Management:

- distribution reliability
- tools and techniques for market monitoring
- risk responsibility for supply in deregulated electricity markets - the Latin American case
- diagnostics for power cables

Telecommunication, Information and Control:

- demand side in markets
- energy market analysis
- optimal power flow and dispatch methods
- power system instrumentation

Industrial Power Distribution:

- distributed generation and compensation
- methodologies for harmonics modeling and simulation
- practical aspects of ferroresonance
- power quality and harmonics

Developments in Power Engineering Technologies:

- assessing the need to include higher order terms for small-signal (modal) analysis
- generating stability model validation testing
- harnessing untapped solar potential around the world
- impact of load models on the power system dynamic analysis

Special technical sessions are also being offered. These sessions are geared toward the working professionals in reviewing or developing their practical engineering skills.

Many topics, including diagnostics

for power cables, end of life for power transformers, asset management in a power utility, and power system ground techniques, will be covered.

SHOWCASE OF INNOVATION

The Sheraton Hall on the Lower Concourse of the Sheraton Centre will feature displays of new or soon-to-be introduced products of interest to the power industry. In order for a product to qualify for display, it must be an innovative or "groundbreaking" concept or application. It must have demonstrative benefits to the power industry and demonstrative potential to significantly change the power industry.

TUTORIALS

In addition to the general conference sessions, the PES Power Engineering Education Committee will present four full-day tutorials.

The first day focuses on Developments in Power Communication Systems. The tutorial will help to develop sound fundamentals in communications, software and hardware system for efficient system integration. These techniques are especially helpful in the modern deregulated power industry.

The second tutorial focuses on SCADA systems. The course will give some background into SCADA systems and how they fit into today's power industry.

The third tutorial is a basic overview of evolutionary computation and other heuristic optimization techniques. The tutorial is divided into two parts. The first part is a general overview of modern heuristic techniques such as fundamentals in genetic algorithms and evolutionary programming and strategies. The second part takes a practical look at heuristic approaches to power system problems such as security assessment and T & D planning.

The final tutorial examines recent technology advancements that have changed the protective relay into an IED.

