

PQ Issues in Power Quality

September 12-13, 2006 - Montreal, Quebec, Canada - Fairmont Queen Elizabeth Hotel

The growing use of electronic loads in industrial and commercial networks has substantially increased concerns about power quality. Throughout the world, leading utilities are reviewing their policies concerning the damage or economic impact caused by power quality problems, revising the planning and operation standard practices and investigating new avenues for improving power quality and providing enhanced types of service to their customers.



Keynote Address
& **Tutorial**

Alex McEachern

President, Power Standards Lab (PSL)

CEATI is bringing together the industry's most respected experts to discuss critical issues in four sessions (along with a tutorial from Alex McEachern, one of the most creative and influential minds in power quality):

- 1 Distribution Network Power Quality and Reliability
- 2 Developments in Power Quality Monitoring and Metering
- 3 Power Quality Standards and Regulations
- 4 Stray Voltages: Reality and Public Perceptions

PQ Issues in Power Quality

September 12

8:00 - 8:30 Workshop Registration / Continental Breakfast

8:30 - 9:00 Opening Comments
Jerry Lepka, Technology Coordinator
CEATI Power Quality Interest Group

9:00 - 9:45

Keynote Address

Alex McEachern

President, Power Standards Lab (PSL)

Embracing Customer-Side Solutions:

A worldwide trend of commercial and industrial customers recognizing power quality as a compatibility problem

1

Network Power Quality and Reliability

Discussion themes include:

- Impact of distributed generation on distribution network power quality and reliability
- Major industrial customers - power quality issues and expectations
- Reliability improvements in modern distribution networks

9:45 - 9:55 Session Introduction
Eric Valois, BC Hydro

9:55 - 10:35 Case Histories:
Investigations of Power Quality at Data Centers
David Mueller, Electrotek Concepts

10:35 - 11:15 Harmonic Analysis and Resonance Mitigation in Large Industrial Plants
Johan Enslin, KEMA Inc.

11:15 - 11:30 *Morning Break*

11:30 - 12:10 Analysis of the Power Quality Impact of Distributed Generation on Canadian Rural Distribution Networks
Chad Abbey,
CANMET Energy Technology Centre

12:10 - 13:10 *Lunch*

2

Developments in Power Quality Monitoring and Metering

Discussion themes include:

- PQ monitoring & distribution automation
- Interharmonics and their impact on PQ measurements
- Broadband over powerline - developments and applications

13:10 - 13:20 Session Introduction
Georges Simard, Hydro-Québec

13:20 - 14:00 A Case Study of Flicker/Interharmonic Problems Caused by Variable Frequency Drives
Wilsun Xu, University of Alberta
Richard Bahry, FortisAlberta

14:00 - 14:40 The Use of Power Quality Data in Distribution Automation
Georges Simard, Hydro-Québec

14:40 - 14:55 *Afternoon Break*

14:55 - 15:35 An Assessment of BPL Technologies for Power Quality Applications
Pierre Garneau, Samir Sammoun,
SHS Technologies Inc.

15:35 - 16:15 Broadband over Powerline – Advances and Applications
Erich Gunther, EnerNex Corporation

16:15 - 17:05 Power Quality Measurement Service in the Support of Large Customers
François Levesque, Hydro-Québec

September 13

8:00 - 8:30

Continental Breakfast

3

Power Quality Standards and Regulations

Discussion themes include:

- Regulator perspectives on using PQ in performance based regulations
- PQ standards for household use
- Current status and future development of PQ standards and planning guidelines

8:30 - 8:40

Session Introduction
Robert Saint, NRECA

8:40 - 9:20

Uniform Power Quality Classification Methodologies
Jasper van Casteren, KEMA Inc.

9:20 - 10:00

The Status and Development of PQ Standards
Mark McGranaghan, EPRI Solutions

10:00 - 10:40

Benchmarking an Urban Distribution System
Arun Narang, Kinectrics Inc.

10:40 - 10:55

Morning Break

4

Stray Voltages: Reality and Public Perception

Discussion themes include:

- Urban: Detection, mitigation and effects on PQ
- Rural: Detection, mitigation and effects on PQ
- Study cases involving stray voltage problems

10:55 - 11:05

Session Introduction
Rob Kolt, Manitoba Hydro

11:05 - 11:45

Stray Voltage at the Briarcliff Pool
Cristiana Dimitriu, ConEdison

11:45 - 12:25

Resolving Stray Voltage Problems for Rural British Columbia Customers
David Rogers, BC Hydro

12:25 - 13:05

State of the Art Practices to Mitigate the Impact of Stray Voltages in North America
Georges Simard, Hydro-Quebec

13:05 - 14:05

Lunch

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Tutorial



14:05 - 16:45

Voltage Sag Immunity Presented by Alex McEachern

Voltage sags are the #1 problem for industrial and commercial electronics – more than 10 times as common as power outages. What can be done? Well, it's a compatibility problem: you can either make the power better, or you can make the loads tougher. Both solutions work, but making the loads tougher is both cheaper and more reliable.

This is a half-day tutorial with practical, down-to-earth, hands-on advice, with easy to understand theory, aimed at electrical engineers, facility engineers, and utility key account engineers.

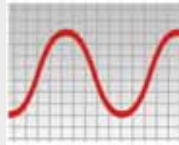
16:45 - 17:15

Workshop Summary
Jerry Lepka, CEATI

Manufacturers will have the opportunity to showcase their products. Please contact us with any exhibition inquiries.

This workshop is organized with support from the Participants of CEATI's Transmission & Distribution Interest Groups





Early Bird Special
Save \$75 on registration by sending in this form before June 1, 2006.

Note: Must include payment details. Not applicable to Speaker, CEATI or PQIG Participant rates.

Your Information

Name

Organization

Street Address

City, Province/State

Postal/Zip Code

E-mail

Phone

Fax

I would like to be notified of similar CEATI events.



Hotel Accomodations

Hotel reservations can be made at the **The Fairmont Queen Elizabeth**, 900 Rene-Levesque Blvd. W., Montreal, QC

A preferred rate of \$160/night will be made available to all guests registering before July 15. Reservations can be made online at www.fairmont.com/queenelizabeth/ using promotional code GRCEA1.

You may also reserve by phone by calling (514) 861-3511. Please mention promotional code CEAT1 [one].




This rate is subject to availability.

Send your completed registration form by fax to **(514) 904-5038**.

Registration Fees

- \$295 (+ 6% GST; 7.5% QST) Speakers
- \$395 (+ 6% GST; 7.5% QST) PQIG Participant Organizations
- \$545 (+ 6% GST; 7.5% QST) CEATI T&D Participant Organizations
- \$795 (+ 6% GST; 7.5% QST) Other Attendees
- \$1070 (+ 6% GST; 7.5% QST) Exhibitors (please see information sheet)

Payment Options

- VISA Cheque
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- American Express   

Card No.

Expiry Date / MM/YY

Signature

Cardholder

Important Notes

Registration fees include continental breakfasts, lunches, refreshment breaks, evening reception and proceedings packages.

Important Notices

- All prices are listed in Canadian Dollars (\$CAD).
- Charges will appear as 'CEA Technologies Inc.'
- We will not accept payment by cheque after August 1, 2006.

All cancellations received before August 15, 2006 will be subject to a \$100 processing fee. There will be no refunds granted after this date. Delegate substitution is permitted at no extra cost.

All workshop inquiries should be directed to **workshops@ceatech.ca**