

# CIGRÉ WORKSHOPS – DESCRIPTIONS

**MONDAY, SEPTEMBER 22, 2014**

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*Each workshop will include a question period.*

07:45 – 08:00     **WORKSHOP DAY PRESENTATION AND WELCOME ADDRESS**     Pegasus

08:00 – 09:30     **WORKSHOP #1: C1 – SYSTEM DEVELOPMENT AND ECONOMICS**     Pegasus

**Title: Electricity Utility Asset Analytics and Asset Management Applications**

**Chair:** David Curtis, Hydro One, Canadian Member for CIGRÉ SC C1

**Description**

This workshop focuses on the applications of asset analytics in managing aging electricity transmission & distribution system infrastructure. As a large number of assets age and deteriorate, their operational risk increases and could impact electricity customers. The building and application of asset analytics tools to support better decisions in planning and prioritizing asset investment has been practically implemented by a few utilities. Asset Analytics considers factors including asset condition, reliability performance, utilization, economics, criticality to the system, and geospatial information. Asset analytics covers both historical and predictive capabilities to better manage work and planning the management of assets. This workshop will leverage the implementation experience in Canada.

Presenters of this workshop includes:

- Bruno Jesus of Hydro One
- Dan Botari of Hydro One
- Yury Tsimberg of Kinectrics

09:30 – 10:00     **BREAK**     Pegasus

10:00 – 11:30     **WORKSHOP #2: C6 – DISTRIBUTION SYSTEMS AND DISPERSED GENERATION**     Pegasus

**Title: Advanced Distribution System (Smart Grid) With Advanced DMS, & WiMax Communication**

**Chair:** Michael Ross, Hydro Québec (IREQ), Canadian Member for CIGRÉ SC C6

**Description**

The workshop focuses on practical aspects of applying smart grid technologies towards further automating electricity distribution systems. Three utilities highlight the benefits and challenges of integrating smart grid technologies into the existing systems.

- Hydro One plans to outline the implementation of their Advanced Distribution System (ADS) or “smart grid” technical pilot project, to enhance the operating and effectiveness of a portion of the electricity distribution system. Topics include Hydro One’s ADS “Living Lab”, advanced distribution management system (DMS) algorithms, and WiMax for protection and control applications.

- Hydro Québec plans to outline the work on distribution automation, and the more advanced innovative technologies into their distribution system.

- Burlington Hydro plans to outline how “Disruptive Energy Technologies” could significantly change electricity utilities business and operations. A brief overview of the GridSmartCity Project will also be discussed as time permits.

Presenters of this workshop includes:

- Joe Zerdin of Hydro One
- Dunstan Chan of Hydro One
- Jean Lessard of Hydro Québec
- Dan Guatto of Burlington Hydro

11:30 – 13:00 **LUNCH BREAK**

13:00 – 14:30 **WORKSHOP #3: D2 – INFORMATION SYSTEMS AND TELECOMMUNICATIONS**

Pegasus

**Title: Evolving Grid And Effectively Managing Big Data, IT & Telecommunications**

**Chair:** Bill Smith, Siemens Canada Limited, Canadian Member for CIGRÉ SC D2

**Description**

This workshop focuses on the opportunities and challenges presented by the increasingly vast amounts of technical data resulting from automation of the electricity distribution system to becoming a “smart grid”. The drive to make use of data to create information, to more effectively manage operational power system risk and more economically and effectively manage the grid in the short as well as long term, in ways which are practical. The requirements for transmitting, archiving, retrieving, and re-transmitting data/ information for a wide range of applications from the extremes of real-time event processing and monitoring, to longer term planning. These extremes presents challenges to power system telecommunications system in terms of bandwidth to transport the data/ information in a rapid and economical way, as well as require information technology (IT) hardware and software to rapidly and economically allow utilities and customers to effectively use power system information, within the framework of cyber security needs, the realities of ensuring data integrity, retaining privacy, and still making sense of information when system data is missing. Learn from leading industry experts regarding the current status of this evolving area of data driven decision making, which will potentially be disruptive in the approach to managing, operating, and maintaining the more automated distribution systems.

Presenters of this workshop includes:

- Tim Fairchild of SAS
- Gerald Gray of Electric Power Research Institute
- Chris Holmes of Electric Power Research Institute
- Robert Wong of Toronto Hydro

14:30 – 15:00 **BREAK**

Pegasus

15:00 – 16:30 **WORKSHOP #4: C4 – SYSTEM TECHNICAL PERFORMANCE**

Pegasus

**Title: Power System Harmonics: New Challenges And Potential Solutions**

**Chair:** Danielle McNabb, Hydro-Québec, Canadian Member for CIGRÉ SC C4

**Description**

This workshop focuses on the impacts on the electricity system of increasing amounts of emerging technologies, such as renewable generation, changing load characteristics, and power electronics devices as it relates to power system harmonics. The different approaches and information are needed to address power system harmonics in the evolving grid, including industry standards, the identification of concerns, monitoring, the analyses tools, test methods, and system mitigation measures. This workshop will outline these issues and challenges, and leverage the experiences and challenges from industry in Canada and academia.

Presenters of this workshop includes:

- Wilsun Xu of University of Alberta
- Bahram Khodabakchian of Hydro-Québec
- Francisc Zavoda of Hydro-Québec