

Conference Agenda

# Underground HV Cables

Continuous Improvement in Work Practices,  
Equipment, & Design for the Effective Management of  
Underground Transmission Cable Systems

**Transmission 2018**  
**November 27-28 • Tucson, AZ**

# Conference at a Glance

## OVERVIEW

Building on the success of past industry-open cables workshops in 2015, 2016 & 2017, CEATI International's 2018 event will provide a forum for sharing information on best practices and emerging issues for working on transmission underground cable systems.

Supported by CEATI's Transmission Underground Cables (TUC) Program, the event will address and explore the latest in the development of tools, techniques, research, and experience to improve the design, installation, operation, and management of transmission underground cable systems.

Presentations will draw from the expertise and experience of electric utilities, cable and accessory manufacturers, and thought leaders in the field of engineering work practices. The workshop will provide an open forum for information exchange and deliberation, with a focus on technical presentations and the sharing of ideas and experiences for the benefit of the industry. Presentations will range from theoretical to real-world examples and lessons learned from cables projects.

## THEMES

### 1 Asset Management & Life Extension

Underground cables are very costly to replace and most major urban centres have very limited space for installing or replacing existing underground cable infrastructure. This session will focus on utilizing Asset Management tools and methodologies to extend the service life of these valuable assets while managing risks associated with operating aging assets and investigating ways to utilize the existing infrastructure to install new facilities.

### 2 Advanced Diagnostic Techniques

With many utilities still operating first generation cables, the typical life expectancy of high voltage underground cable systems that are in use around the world is not necessarily clear. Having the ability to identify cables that are approaching end of life and deferring cable replacement projects until absolutely necessary can effectively manage risk and result in significant cost savings to utilities. Presentations and open forum discussions will be held during this session for attendees to gain an understanding of the various types of underground cable diagnostic test techniques and methodologies being proposed and used in the industry, as well as the merits of each.

### 3 Design and Installation Options

Topics covered under this session will look at emergency technologies and innovations to that improve the effectiveness, efficiency, and safety of operating transmission underground cable systems. Other topics covered will be innovations in accessories and monitoring components, systems that provide real time monitoring information, and emerging cable designs and work methods to utilize HPFF steel pipe infrastructure as conduits for new XLPE cable systems.

# Program Description

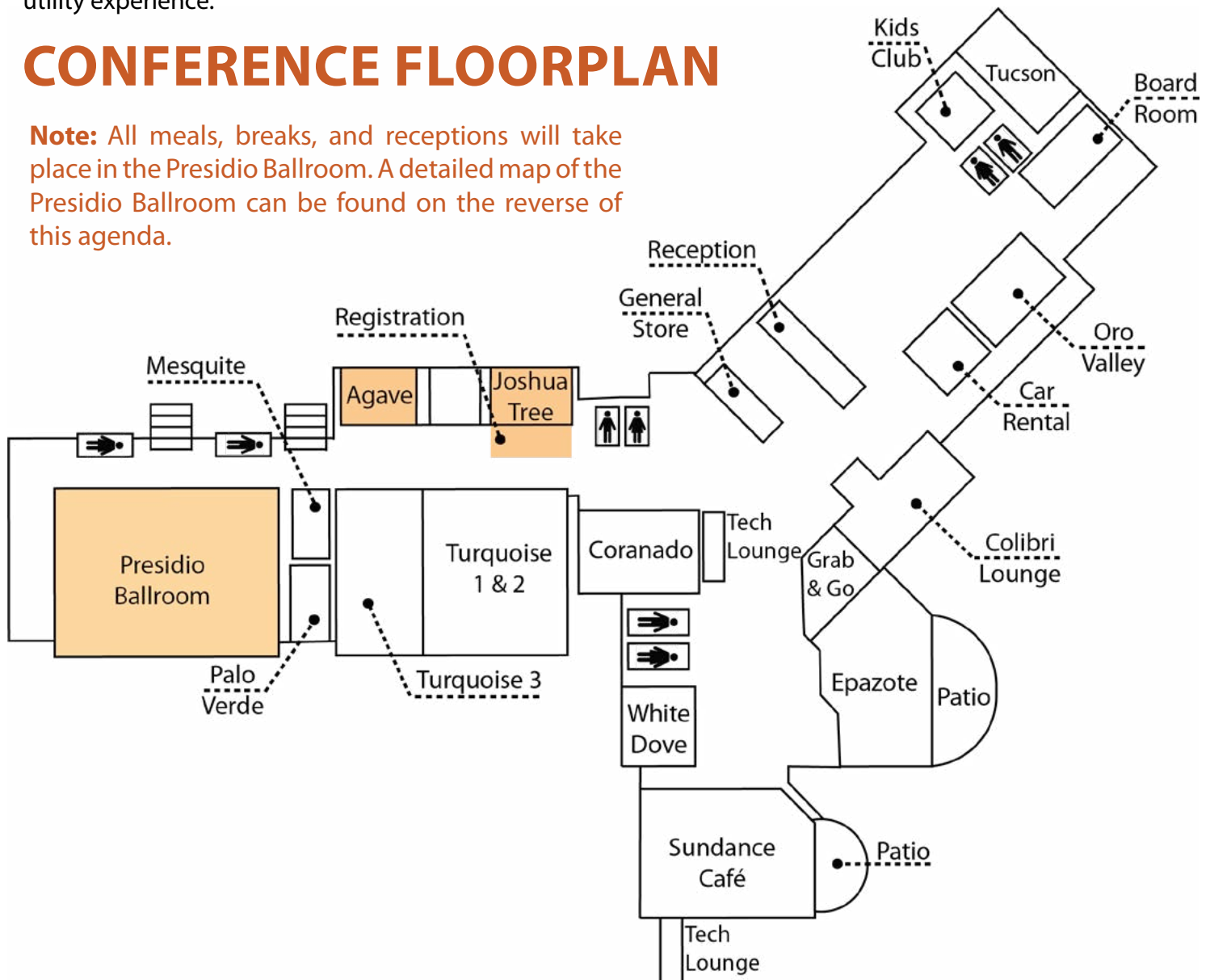
## TRANSMISSION UNDERGROUND CABLES PROGRAM

Both fluid-filled and XLPE high voltage underground cables are an essential part of many urban transmission systems. While they offer a number of distinct advantages in certain environments, they are also expensive to maintain and replace. Adding to these maintenance costs, many fluid-filled installations have been in operation for over half a century, with a great number of these systems being operated outside their original design parameters.

The objective of the Transmission Underground Cables (TUC) Program is to provide a forum for the exchange of information on cable asset management and to establish and promote techniques and tools for improving the management of fluid-filled and XLPE high voltage underground cable systems. The program's current focus is on developing a Reference Manual for Transmission Cable Systems, which will include the compilation of best work practices and procedures for the design, maintenance, and operation of cable systems based on utility experience.

## CONFERENCE FLOORPLAN

**Note:** All meals, breaks, and receptions will take place in the Presidio Ballroom. A detailed map of the Presidio Ballroom can be found on the reverse of this agenda.



# Day 1 - HV Cables

November 27, 2018

## 7:30-8:30 Registration & Breakfast

8:30-8:40 **Opening Remarks & Welcome Address** Steve Haddock, CEATI International

8:40-9:00 **Conference Openings: Welcome and TUC Introduction** Steve Haddock & Mike George, CEATI International

### Session 1 - Asset Management & Life Extension

 Agave

9:00-9:30 **Maintenance of High Voltage Power Cables** Boguslaw Bochenski, Kinectrics

9:30-10:00 **Cable Failure: Ultimate Causes** William Higinbotham, EA Technology L.L.C.

## 10:00-10:30 Break

10:30-11:05 **Hydro One's Underground Transmission Asset Management Strategy and the Role of Asset Analytics** Tyler Wales, Hydro One Networks

11:05-11:40 **Report on CEATI Transmission Cable Health Index Workshop** Gerry Sheerin, Sheerin Technical

11:40-12:00 **Session 1: Questions & Discussion** Conference Participants

## 12:00-1:30 Lunch

### Session 2 - Advanced Diagnostic Techniques

 Agave

1:30-2:00 **Asset Management of Electric Power Distribution Cables Using the NRC Depolarization Current Measurements** Dr. Refat Ghunem, National Research Council of Canada

2:00-2:30 **Gaining Insight into the Condition of Power Cables: Distributed Temperature and Acoustic Measurements** Dr. Henrik Hoff, AP Sensing

2:30-3:00 **Asset Condition Assessment of SCFF & HPFF Cables** Mark Fenger, Prysmian Cables

## 3:00-3:30 Break

*Last updated 15 Nov 2018. Agenda is subject to change without notice.*



# Day 1 - HV Cables

November 27, 2018

3:30-4:00	<b>Manhole Explosions: Why They Occur &amp; How to Prevent Them</b>	<i>Glen Bertini, Novinium Corporation</i>
4:00-4:30	<b>High Pressure Fluid Filled Cable Ridge Diagnostics</b>	<i>Siddarthan Mohan Public Service Electric and Gas Company</i>
4:30-5:00	<b>Session 2: Questions &amp; Discussion</b>	<i>Conference Participants</i>

## 5:00-7:00 Networking Reception



## THANK YOU TO OUR SPONSORS



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# Day 2 - HV Cables

November 28, 2018

## 7:30-8:30 Breakfast

### Session 3 - Design & Installation Options

 Agave

8:30-8:35 **Conference Day 2 Introduction**

Steve Haddock,  
CEATI International

8:35-9:00 **Fiber Optic Cables Embedded in Power Cables**

Boguslaw Bochenski,  
Kinectrics

9:00-9:25 **Re-Conductoring HPFF and HPGF Cable Systems**

Jim Michael,  
W.A. Chester L.L.C.

9:25-10:00 **Lessons Learned on Underground Cable Installation**

Ron Knapwurst,  
American Transmission  
Company

## 10:00-10:30 Break

10:30-11:00 **Exelon Experience with HPFF Pipe Retro-Fitting**

Frank Frentzas, Exelon &  
Afshin Avvali, Pepco Holdings

11:00-11:30 **City Cables: An Outstanding Product Portfolio for a Wide Range of Applications**

Bob Hobson, NKT Inc.

11:30-11:55 **Session 3: Questions & Discussion Session**

Conference Participants

11:55-12:00 **Conference Concluding Remarks**

Steve Haddock &  
Julia Nordlund,  
CEATI International

## 12:00-1:15 Lunch

**2:45 Prize Draw**

*All winners must be present to be eligible.*

 Presidio Ballroom

**6:30 The CEATI Women in Power Group's Networking Reception**

*Facilitator: Shelly Feltmate, New Brunswick Power*

 Joshua Tree

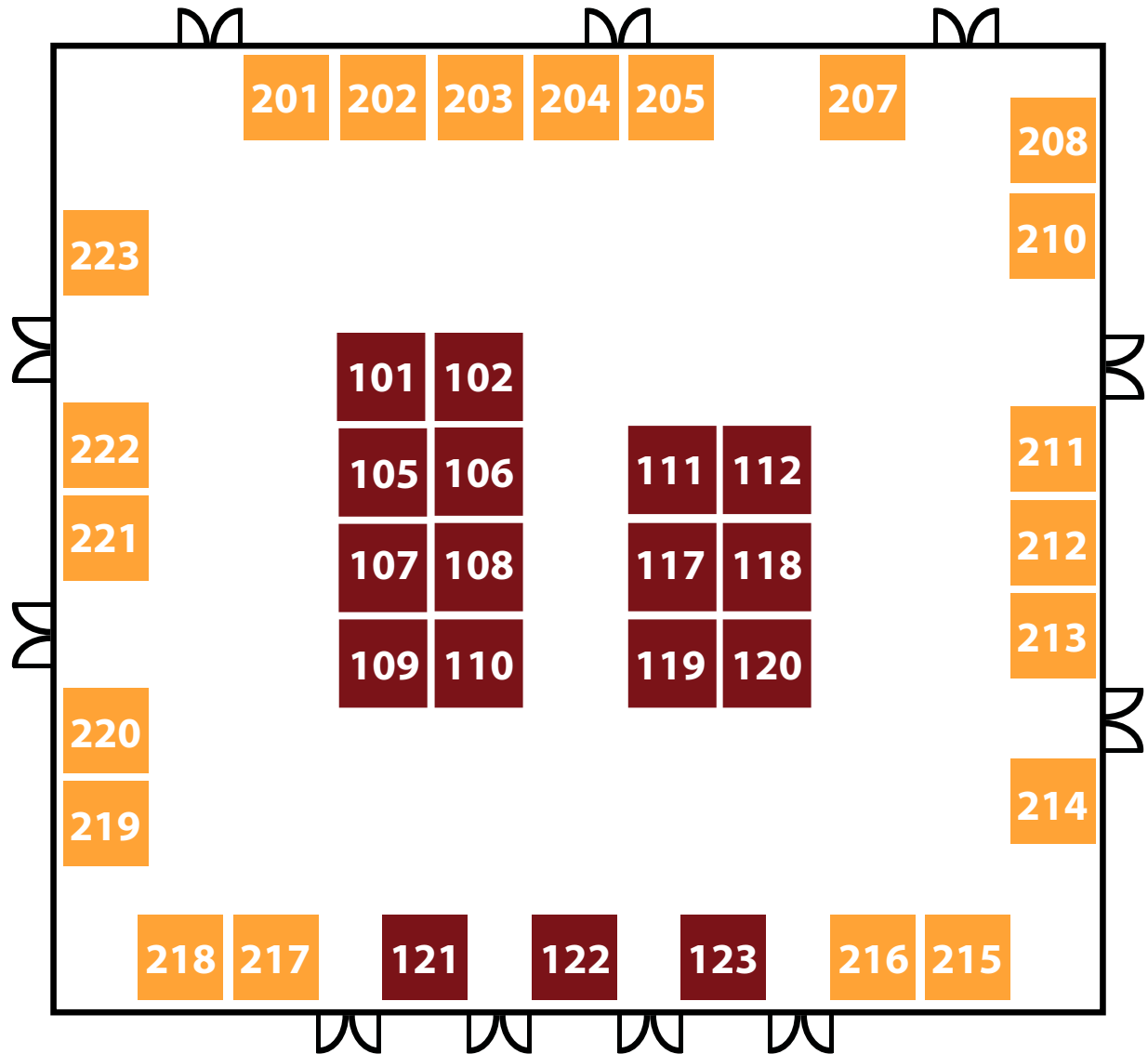
Panelists: Patti Metro, National Rural Electric Cooperative Association  
Mehrnoosh Janbakhsh, Saskatoon Light & Power  
Liz Palmera-Nunez, Newfoundland Power

*Join at us at the Women in Power Group's Networking Reception. Appetizers will be served and drinks will be available for purchase. Everyone is welcome to register and partake. Interested parties should email [wip@ceati.com](mailto:wip@ceati.com)*

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# Presidio Ballroom: Exhibitors



Main Entrance

Advanced Test Equipment Rentals (220)

Ampacimon Inc. (203)

AP Sensing (201)

Borealis Compounds (218)

**CableQ (108)**

CEATI International (106)

Classic Connectors USA (202)

Copperleaf (214)

DiGioia Gray (223)

EA Technology (222)

EDM International & INTEC Services (216)

EJ USA (212)

Exacter Inc. (221)

**FDH Infrastructure Services (101)**

**Galvatech2000 (112)**

Hanson Professional Services (205)

**IPS Energy (107)**

**Kinectrics (117)**

Lindsey Manufacturing Company (208)

**LineVision (111)**

Linewise Aerial (213)

Manitoba Hydro

International (204)

**METSCO Energy Solutions (109)**

Nexans High Voltage (210)

**Novinium (121)**

**Onstream Pipeline Inspection (123)**

Osмосе Utilities Services (219)

**Powertech Labs (105)**

Preformed Line Products (215)

Public Utilities Maintenance (207)

**SAE (102)**

**SEDIVER (120)**

Southwire (217)

**Sterblue (118)**

Tetra Tech (211)

**Tower Power (110)**

**W.A. Chester (122)**

**WIKA Instrument (119)**