

## WORKING DRAFT

### Professional Development Workshop

#### “Infrastructure Climate Risk Assessment: The First Step to Adapting to Changing Climate”

**Location: TBD**

**Date: TBD**

#### **Abstract**

This one day workshop will provide infrastructure practitioners, planners, managers and decision-makers with information about, and practice with a practical tool and process that systematically assesses the risks of current and future climate on civil infrastructure.

Engineers Canada, in partnership with Natural Resources Canada, has developed the PIEVC Engineering Protocol, which is a structured procedure using standard risk assessment methodologies to assess and fully document the vulnerability of infrastructure to the impacts of current and future climate. Two facilitated group sessions will demonstrate the steps in the Protocol through hands-on, small group exercises to define the infrastructure components and climate parameters and to undertake a qualitative screening level risk assessment using completed case studies to illustrate real life applications.

This workshop will be of interest to engineers and geoscientists who are involved in planning, pre-design, design, operation, maintenance and management of infrastructure and who, now and in the future, need to consider climate change for these activities for new infrastructure or for rehabilitating or retrofitting existing infrastructure. It will also be of relevance to municipal planners, managers and operators of infrastructure and provincial and territorial regulators and policy-makers to better understand the challenges that civil infrastructures face with current climate e.g. extreme weather events and future climate.

The workshop will include a morning coffee break and lunch. Coffee will be available throughout the afternoon sessions. Copies of presentation materials will be provided.

#### **Educational Objectives**

Upon completion of the Workshop, participants should:

- Have an increased understanding of historical climate and climate change projection as it pertains to civil infrastructure ,
- Have a basic understanding of risk assessment processes as they pertain to infrastructure response to climate change,
- Have hands-on experience with the application of climate change risk assessment to a real-world example.
- Recognize the benefits of a multi-disciplinary and multi-stakeholder team to address the impacts and complexities of climate change on civil infrastructure

## **Generalized Agenda**

- 8:30 **Registration**
- 9:00 **Welcome and Opening Remarks**  
TBD  
Engineers Canada
- 9:10 **Background on Infrastructure and Changing Climate**  
D. Lapp, FEC, P.Eng., Engineers Canada
- 9:30 **Current and Future Climate Trends and Impacts on Infrastructure**  
TBD – climate expert
- 10:20 Coffee Break and Networking
- 10:40 **Principles of Risk Assessment**
- 11:10 **Climate Change and Infrastructure Risk Assessment**  
**The PIEVC Engineering Protocol – Principles and Benefits**
- 11:30 **Case Study #1 Presentation on Application of the Protocol**
- 12:00 Lunch and Networking
- 12:45 **Infrastructure Component and Climate Parameter Matrix Definition**  
Small Group Discussion – D. Lapp, FEC, P.Eng. , Engineers Canada
- 13:30 Group De-Brief – D. Lapp, FEC, P.Eng.
- 13:45 **Applications of Infrastructure Climate Risk Assessment – The Process and Results**
- Case Study#2: Presentation on Application of the Protocol**
- Case Study #3: Presentation on Application of the Protocol**
- 14:45 **Risk Assessment Matrix Completion**  
Introduction and Small Group Discussion –D. Lapp, FEC, P.Eng.
- 16:00 **Risk Assessment Matrix Completion**  
Plenary De-Brief –D. Lapp, FEC, P.Eng.
- 16:30 **Planning and Organizing an Infrastructure Climate Risk Assessment**  
**A Panel Discussion –TBD Moderator**
- 17:00 **Closing Remarks**  
TBD and Engineers Canada