



IEEE Power & Energy Society Winnipeg Section PRESENTS...A LUNCHEON MEETING

TOPIC:	A Computer Vision Early-Warning Ice Detection System for the Smart Grid
PRESENTER:	Jean-Sebastien Stoezel, P.Eng
TIME AND DATE:	12:00 Noon, Tuesday, February 28, 2012
LOCATION:	Holiday Inn South, 1330 Pembina Highway, Winnipeg

◇ Cash bar available at Noon.
◇ Lunch served at 12:15 PM.
◇ Meeting concluded at 1.30 PM.
◇ Cost of the meal (payable at the door).

Early registration (*On or Before 24th Feb.*)
IEEE Members - **\$15.00**
Non-Members - **\$19.00**

Late registration (*After 24th Feb*)
IEEE Members - **\$17.00**
Non-Members - **\$21.00**

The IEEE PES Winnipeg Chapter must guarantee a minimum attendance to the hotel, so please take a moment to register early by RSVP to **Jieping Shao** by **Friday Noon, 24 Feb. 2012**, in one of the following ways:

Phone: 360-7347
Email: JShao@hydro.mb.ca
Fax: 360-6142

Abstract:

Manitoba Hydro (MH) has been very proactive in melting ice on distribution (66 and 25 kV) transmission lines in order to prevent ice damage since the mid 1980's. In 2004 MH Research Management Board sponsored an investigation into new and innovative methods to measure ice formation on the transmission lines. This investigation resulted in development and implementation of a state of the art early ice warning system. The vision based ice detection system measures ice accumulation using digital images directly from the overhead line conductors. Early warning ice alarms, ice accumulation rate information and accurate visual information of ice profiles is available on a 24-7 basis to the appropriate ice storm staff using the corporate WAN infrastructure. A total of 15 early warning stations have been implemented with 2 ice seasons of system experience. Additional development has been undertaken for an algorithm to aid in the detection of hoar frost transformation to ice. Hoar frost on the transmission conductors presents little risk, however under certain conditions hoar frost can transform into ice very quickly, creating a serious condition. The ice vision system is a form of Smart Grid implementation on the distribution system.

Biography:

Jean-Sebastien Stoezel, B.Sc., M.Sc., is an Embedded Systems Design Engineer at the Manitoba HVDC Research Centre (MHRC). Jean-Sebastien completed his post-secondary education in Montpellier, France, before moving to Winnipeg. Since joining the MHRC in 2009 Jean-Sebastien has been acting as Technical Lead for the Line Fault Locator for HVDC Systems, Technical Lead for the innovative Computer Vision Based Early Warning Ice Detection System and Technical Lead for the Manitoba Hydro Bipole 3 Right of Way Environmental Monitoring System.

Jean-Sebastien has been involved in other research projects including an electric vehicle battery repurposing system that interfaces with utility grids, and other custom designed embedded systems.

Re: IEEE PES Luncheon Meeting at 12:00 Noon on Tuesday, February 28, 2012

Name: _____ Any Diet Restrictions: _____

Company: _____

Telephone no.: _____ Number in party: _____

Please visit our website: <http://winnipeg.ieee.ca/pes>.