

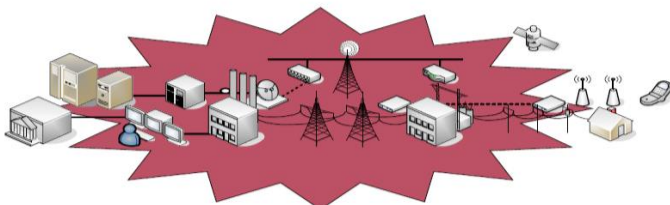
SMART GRID SEMINAR



This seminar focus on Smart Grid systems which are changing the electricity industry. Speakers are from the industry and will share their understanding of the challenges of Smart Grid across real case studies and discussions with participants.

The seminar will present the international Smart Grid panorama including organizations roadmap, international standards. Participants will examine the different objectives of Smart Grid (performance, energy efficiency and empowerment). The speakers will focus on applications, technologies, communications and data management for high voltage and substations, and also for medium and low voltages. They will conclude the seminar with discussion on future developments and the changes in the market structures.

This seminar is offered during three in-class days to senior and middle managers from dispatching center. Seminars and pedagogical material (PowerPoint presentations) is provided by HEC Montreal and are offered in English with a translation into Chinese. At the end of the seminar, HEC Montreal will issue a certificate to participants.



The SmartGrid Seminar organizing team are:



Marc Lacroix is VP Business development at Vizimax. During his career, he has developed a unique expertise related to automation technologies applied to Transmission and Distribution. He was responsible for designing and implementing Special Protection Systems and automation systems used in substations and power plants. During his last assignment (32 years) at Hydro-Quebec, he was responsible for the smart grid deployment and for Cybersecurity governance. Marc Lacroix was involved as Project director in many control centers projects around the world. He has also been active on IEEE standard committees for more than 20 years. He is a member of IEC TC95 and TC57 WG 10, 15 and 17 and is also active in the new IEC SmartEnergy, SyC committee.



Georges Simard worked for Hydro-Quebec for 30 years as a Development Engineer for the Distribution Network Division. He contributed to the writing of internal technical standards of Hydro-Québec's distribution network including planning, system protection, Distributed Generation integration and Power Quality. He was responsible for developing the Hydro-Quebec Distribution Roadmap including Smart Grid applications. He also supports EPRI's Smart Distribution Research program. He has served on several technical committees, as the International Electro20technical Commission (IEC), the Institute of Electrical and Electronic Engineers (IEEE/PES), the Electrical Power Research Institute (EPRI), the Centre for Energy Advancement through Technological Innovation (CEATI), and he is a Senior Member of (IEEE). He also was Editor in Chief of the IEEE PES long term vision (GridVision 2050) released in April 2013.

Testimony:

« It is certainly helpful to have learnt the situation of the smart grid abroad from the seminar, especially the great different to our domestic industry. We focus more on the transmission techniques, while the foreign countries focus more on the distribution of electric power. »

Participants from Central China Grid Corp. – April 2016





智能电网培训项目

智能电网系统概述

为什么采用智能电网

什么是智能电网

智能电网的目标

智能电网标准 (IEEE 、 IEC...)

国际智能电网概述

智能电网组织蓝图和愿景 (IEEE 、

IEA/ISGAN EPRI 、 NIST 、 主要的
公共事业公司)

智能电网示范项目成本

智能电网的运行和控制

控制中心

控制中心的作用

EMS/DMS 功能

智能电网的通信 : 协议和通信标准

- 基于网络的通信

智能电网的网络安全

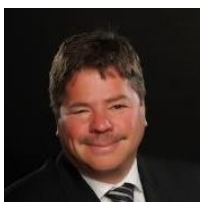
智能配电——中低压 : 智能配电应用和技术

- 智能电网自动化 : 61850 介绍

- 智能电网的 61850- 远程维护

一体化电网面临的挑战 : IEEE 2050
年长期愿景

未来电网面临的新挑战



Marc Lacroix 是 Vizimax 的业务开发副总裁。Marc Lacroix 为魁北克电力公司工作了 32 年。他毕业于蒙特利尔大学的工程学院——蒙特利尔工学院并获得机电工程学士学位和工程硕士学位。

在其职业生涯中，他具备应与电力传输和配电的自动化技术应用有关的专长。他曾负责设计和执行变电站和电厂使用的特殊保护系统以及自动化系统。他接受的上一个任务是魁北克电力公司的智能电网布置和网络安全管理。

Marc Lacroix 在全世界的许多控制信息项目上都担任过项目总监。他为 IEEE 标准委员会工作了 20 多年。他是制定 IEC TC95 和 TC57 WG 10、15 和 17 的成员并且在新的 IEC 智能能源、SyC 委员会也非常活跃。



Georges Simard 从 1981 年至 2011 年在魁北克电力公司任职，担任配电网部的开发工程师。在这 30 年里，他致力于编写魁北克电力公司配电网的内部技术标准，包括规划、系统保护、

分布式发电集成和电力质量。从 2005 年至 2011 年，他负责开发魁北克电力公司的配电路线图包括智能电网的应用。从 2009 年至今他还为 EPRI 的智能配电研究项目提供支持。

他在多个技术委员会任职，例如国际国际电工技术委员会 (IEC)、电气与电子工程师学会 (IEEE/PES)、电力研究协会 (EPRI)、技术创新能源发展中心 (CEATI)，而且他是 (IEEE) 的高级成员。他还是 2013 年 4 月出版的 IEEE PES 长期愿景 (2050 年电网愿景) 的主编。

Simard 先生毕业于蒙特利尔大学的工程学院——蒙特利尔工学院并获得机电工程学士学位和工程硕士学位。



国家电网公司
STATE GRID
CORPORATION OF CHINA

HEC MONTRÉAL
蒙特利尔大学商学院

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主任，国际高管教育



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