Title: Technology Trend Map 2015 for the Power Industry

Speaker:
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Date: Thursday, 13 August 2015
Time: 10:00 am – 11:15 am
Venue: Room 603, Chow Yei Ching Building

Abstract:
Technology has been one of the key factors powering the world forward since the industrial revolution. The power industry is one of the conventional industries that has utilized and depended on technology for delivering its basic functions (generation, delivery and utilization), increasing competitiveness, sustaining continuous growth and expanding future opportunities. While almost all investments in the power industry are long-term and large-scale, technologies are changing so rapidly and easily becoming obsolete, we must maintain a close watch and continuous assessment of its progress to ensure our industry to grow healthily and sustainably. This technology trend map examines the key technologies which are considered of importance to the power industry, including both existing and emerging risks and opportunities up to 2030.

Technological advancements and their adoption are driven not only by science and new technology but more so due to business, social and environmental needs. At times, sudden events or catastrophes could also trigger major technological changes in the industry. The power sector is no different. Today, solar PV, distributed resources, transport electrification, storage devices, internet-of-things, smart grids and renewables are entering the power industry as new players and their impacts are not to be taken likely. The Levelised Cost of Energy (LCOE) for different generation means, conventional and renewables, will be presented and discussed. Finally, the utility or power system of the future is a hotly discussed subject today because of all the potential transformation that may come with the rapid technological changes. The conclusions are all pointing to a more low-carbon future, i.e. a new power systems and market environment with more renewables, customer interactions, distributed and intelligent networks working through
connections and smart controllers.

**Biography of the speaker:**
Dr. John Cheng received his B.Eng. (Sask), M. Eng.(McGill) and PhD(McGill) in Canada. His work experiences spanned across different disciplines including large-scale power system controls, dispatcher training simulator, military equipment testing, railroad operations and low carbon technology research and development.

His current role is to lead the Advocacy and Business Innovation team within the Group Sustainability of CLP Holdings. His focus includes climate adaptation, low carbon generation technologies, smart grids, data analytics, solar resources and energy storage. John is a registered Professional Engineer (P.Eng.) in Ontario and a member of HKIE, IEEE, CIGRE and IERE. He has also been serving as the Secretary of World Energy Council – Hong Kong since 2009.

**Organizer:** Dr. J. Zhong