## Organizers:











## **Technical Seminar on Sustainable Mitigation to Climate Change**

Date : 28 November 2018 (Wednesday)

Time : 7:00 – 9:30pm (Registration starts at 6:30pm)

Venue : The Hong Kong Polytechnic University FJ-303

Fee : Free of Charge

CPD hours : 2.5-hour CPD certificate will be provided

### Topics of the Technical Seminar

#### Topic 1: Climate Change Impacts on Energy and Environmental Systems

In this presentation, Dr. Xu will address the key risks and opportunities in sustainable development, focusing on the pressing issues on climate change, including scientific observations in climate change, evolving activities in IPCC (i.e., Intergovernmental Panel on Climate Change), global impacts, and opportunities in mitigation and best practices. He will provide an overview of challenges and impacts on environmental systems and energy infrastructure, including built environments. Exemplar highlights include: Temperature impact on power demand is much higher than on supply infrastructure; impacts on hydropower supply may increase or decrease generation depending on water supply conditions; impacts of wildfires could potentially be high; impacts of climate change have to be understood on the local levels, in disaggregated fashion so that environmental planning and best practice can be defined. More work is needed to evaluate wildfire and sea level rise impacts on the power sector infrastructure and temperature impacts on electricity transmission and distribution.

Dr. Xu will also provide his insight into opportunities in the complex energy systems that we create and maintain to mitigate the impacts from climate change, and important roles expected from us in sustainable development.

#### Speaker:

#### Dr. Tim XU Tengfang

Dr. Xu obtained his Ph.D. from UC-Berkeley, and was a graduate from Tsinghua University, Beijing. He is a part-time Adjunct Professor at Chinese University of Hong Kong since 2015; and served as a visiting Professor at Tsinghua University and Tongji University during 2010-2015. Dr. Xu is an Expert Program Manager at PG&E, California. Prior to PG&E, he was a Scientist and Principal Investigator in building and industrial energy efficiency and low-carbon development programs at Lawrence Berkeley National Laboratory (LBNL), where he had worked from for 16 years (1999 to -2015).

At LBNL, Dr. Xu managed multi-million-dollar projects and teams of researchers, including project development, fund-raising, budgeting and staffing, and project management. In addition to performing and managing RD&D projects, he provided extensive technical assistance and advisory services to governments and clients. Xu was elected as the IEST Technical VP and served on the Executive Board (2005-2007), Director of Standards and Practice Committee, and U.S. delegate to ISO-TC209. He was nominated and appointed by the U.S. DOE and EPA as the U.S. Lead Reviewer for IPCC's 5th Assessment Report (IPCC AR5).

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Dr. Xu has published more than 100 peer-reviewed papers, reports, and industrial standards or guides on energy, environment, and innovative policy options promoting clean energy markets. Since 2002, Xu has served as an Editorial Advisory Board Member for six international journals on built environment, energy, and climate change mitigation. Recently he was a co-editor for ASHRAE Cleanroom Design Guide.

# Topic 2: Climate Change Mitigation-Sustainable Utility Incentive Program and Case Study in Hi-Tech Building Energy

Global warming and Climate Change has led to extreme weather and in California years of drought and millions of dead trees feeding an unprecedented risk of wildfires. In 2017, wildfires engulfed nearly 170,000 acres of Northern California wine country and reinforced the importance and urgency of energy efficiency and energy mitigation from a utility perspective. This presentation provides an overview of utility sustainable incentive programs and an energy mitigation case study in Hi-Tech buildings. The methodology utilized in developing a practical and expeditious implementation strategy and program involves performing market research, benchmarking, and emerging technology case studies. The presentation summarizes findings of a submersion cooling technology case study for data centers.

#### Speaker:

## Mr. Stephen FOK

Mr. Stephen Fok received his B.Sc. degree from U.C.L.A. and his M.Sc. degree from M.I.T. Stephen also has an M.B.A. degree and he is a Registered Professional Engineer in California in the field of Mechanical Engineering and Chemical Engineering. Throughout his thirty-six years of career at Pacific Gas and Electric Company, Stephen held various engineering positions in oil, gas, geothermal and nuclear power generation. He is actively involved with environmental protection and climate change and support global warming mitigation.

Stephen is a subject matter expert in utility energy efficiency research and incentive program design. He has presented numerous paper related to municipal wastewater & water use cycle in energy efficiency, clean room energy efficiency and practices of adopting energy efficiency technology at ASHRAE conferences and received a co-authored (with LBNL) Transaction Paper Award titled "Best Practices for Energy Efficient Data Centers Identified through Case Studies and Demonstration".

#### Registration & Enquiry

Registration is opened to all interested persons, but priority will be given to members of the organizers. For application, please complete the Registration Form at the following "On-Line Registration Link" or <a href="https://goo.gl/forms/csLxXupamC0whtP03">https://goo.gl/forms/csLxXupamC0whtP03</a> on or before 21 November 2018. Number of participants is limited to 100. Seats will be allocated on a first-come-first-served basis. Successful applicants will be notified by e-mail on or before 23 November 2018. If the applicants have not received the confirmation e-mail on or before 23 November 2018, their applications will be regarded as not successful.

If typhoon signal no. 8 or black rainstorm signal is in force and still hoisted after 5:00 pm on that date, the talk would be cancelled without further arrangement or notification.

## For enquiry, please contact:

Mr. Jason Kwok via email: jasonyskwok@gmail.com OR Mr. Keith Pang via email: ashrae.keithpang@gmail.com