



THE ELECTRICAL & COMPUTER ENGINEERING PROGRAM PRESENTS

Smart Power Grid in the 21st Century: A Collaborative University-Industry Approach

Professor Akhtar Kalam

Tuesday, June 1st
12.00 – 1.00 p.m. light lunch will be served
Lecture Hall 143

Countries around the world are now recognising the urgent need to address issues such global warming, CO₂ emissions and the need for energy savings. The power industry around the world is recognising the importance of Information and Communications Technology (ICT) and together with governments, understand that a much broader approach is needed to address the significant environmental problems that we are facing. In Australia, State Governments and utilities have invested billions of dollars in electricity infrastructure. Estimates indicate that the adoption of smart grid technologies could save the nation \$5-8 billion over the next 20 years. Yet far too many of those technologies remain on the shelf. Some of the barriers are technical, such as the need for testing and standards. Some of them are regulatory, such as the need for policies that no longer penalise utilities for trying new technologies.

A whole-of-government as well as a whole-off industry approach is required to address the issues. This presentation gives an overview of Smart grid, highlighting current and future energy situation. Also presented will be hurdles, opportunities and challenges in implementing this technology. Finally a possible scenario of co-operation between academia, industries and government will be presented.

Professor Akhtar Kalam has been at Victoria University of Technology, Melbourne since 1985 and a former Deputy Dean of the Faculty of Health, Engineering and Science for 7 years.

He has wide experience in educational institutions and industry across four continents. He received his B.Sc. and B.Sc. Engineering from Calcutta University and Aligarh Muslim University, India in 1969 and 1973 respectively. He completed his MS and Ph.D. at the University of Oklahoma, USA and the University of Bath, UK in 1975 and 1981 respectively. He has worked with Ingersoll Rand and other electrical manufacturers. He has held teaching appointments at the University of Technology, Baghdad, Iraq and Capricornia Institute of Advanced Education, Rockhampton, Queensland.

He is regularly invited to deliver lectures, work on industrial projects and examine external thesis overseas. His major areas of interests are power system analysis, communication, control, protection and cogeneration systems. He has been actively engaged in the teaching of Energy Systems to undergraduates, postgraduates and providing professional courses to the industry both in Australia and overseas. He regularly offers professional development courses on Power System Protection, Renewable Energy and Cogeneration & Gas Turbine Operation to the Energy Supply Association of Australia (ESAA) and Australian Power Institute (API). He also runs postgraduate distance education programme on Power System Protection for the ESAA. He has conducted research, provided industrial consultancy and published over three hundred and fifty seven publications on his area of expertise and written over 29 books in the area. Professor Kalam is a Fellow of EA, IET and a member of IEEE.



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