The Electrical and Computer Engineering Program presents

Energy efficiency and its impact on our daily life

Professor Akhtar Kalam

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Conference room 310

In order to improve Australia's energy efficiency by 2020, Australia needs to deliver a step-change improvement which requires dramatic and sustained actions. This will require:

- increasing awareness of, and attention to, improved energy efficiency
- eliminating or reducing the effect of a range of barriers that block or discourage worthwhile action, including moving towards full energy pricing through the introduction of a broad-based carbon price.

This is not a simple task; it is likely to take a sustained commitment over the next decade. Australians need to make choices on investment in energy and its use. Ideally energy efficiency measures should:

- directly target the issue that needs to be addressed
- be simple to understand and easy to access
- be part of a national, coordinated framework that avoids duplication
- be fair and equitable across income groups and economic sectors
- minimize the level of risk or uncertainty faced by individuals, businesses and governments
- maximize use of existing mechanisms and processes to avoid unnecessary costs of adjustment
- be flexible enough to allow new technologies and solutions to develop.

This presentation will conclude by showing:

- Significant reductions in greenhouse gas emissions are achievable
- Significant quantities of 'negative-cost' opportunities are available
- The long-term marginal cost of abatement is likely to be close to A$60–70 per tonne CO2e
- The promotion and adoption of energy efficiency may involve communication more than technology

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. He completed his MS and Ph.D. at the University of Oklahoma, USA and the University of Bath, UK. He has worked with electrical manufacturers and held teaching appointments at Iraq and Queensland. He is regularly invited to deliver lectures, work on industrial projects and examine external thesis overseas. 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 and Australian Power Institute. He has conducted research, provided industrial consultancy and published over 400 publications on his area of expertise and written over 29 books in the area. Professional Kalam has high professional qualifications in Electrical and Electronic Engineering, (CPEng; CEng; FIEAust; FIET, FAIE, MCIGRE and MIEEE).

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