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20th April 2011

Panel on Environmental Affairs

**Special meeting on the development of nuclear energy for
local power generation on Hong Kong
Friday, 29 April 2011, at 2:30 pm
Written Submission by Energy Institute (Hong Kong Branch)**

1. WRITTEN SUBMISSION

- 1.1 The development of nuclear energy for local power generation will certainly have a major impact on Hong Kong. According to the consultation document on "Hong Kong's Climate Change Strategy and Action Agenda", the Hong Kong Government proposed that 50% of the fuel mix for electricity generation by 2020 would come from nuclear energy. The EI(HKB) has cast doubt on the achievement of this fuel mix target in view of the short time span (see our submission to the same Panel ref.: **CB(1) 538/10-11(03)** on 18 November 2010). The recent accident at Fukushima is likely to make this target even more remote because of an anticipated slow down of the development of nuclear power in China.
- 1.2 The EI (HKB) reiterates that nuclear energy for power generation is a technically feasible option for reducing carbon footprint in Hong Kong. However, the recent Fukushima nuclear accident leading to extensive radiation leakage from the plant has forced us to rethink about nuclear safety. While nuclear power plants may be designed to achieve a high standard of safety with redundant safety features, minor accidents do occur from time to time due partly to mechanical failure of components, and partly due to human faults. We have doubt on whether Daya Bay and other nearby nuclear power plants can be operated safely. Hong Kong cannot afford to have a major accident similar in scale to that at Fukushima.
- 1.3 The EI(HKB) suggests that Daya Bay Nuclear Power Plant should be retrofitted to make it even safer in the light of the lessons learnt at Fukushima. Furthermore, the operators should be given more training. An independent party with Hong Kong's participation should be engaged to monitor the operation on a regular basis.
- 1.4 The EI(HKB) reiterates that Hong Kong should implement demand side management of energy in order to reduce its overall energy consumption. Low carbon life style together with energy efficiency is the way forward to reduce the demand for energy.
- 1.5 Renewable energy should be explored further even though it may not be cost-effective and the pay-back time may be long at this stage. Nuclear power may not come cheap in view of the hidden cost of nuclear power.

2. ABOUT ENERGY INSTITUTE (HONG KONG BRANCH)

The Energy Institute (EI) is the professional body for the energy industry, delivering good practice and professionalism across the depth and breadth of the sector. A Royal Chartered membership organization in UK, the EI supports over 14,000 individuals and 300 companies across 100 countries, serving society with independence, professionalism and a wealth of expertise in energy matters. The EI is licensed by the Engineering Council (UK) to offer Chartered, Incorporated and Engineering Technician status to engineers, the Science Council to award Chartered Scientist status, and also licensed by the Society for the Environment to award Chartered Environmentalist status.

The purpose of the EI is to develop and disseminate knowledge, skills and good practice towards a safer, more secure and sustainable energy system. In fulfilling this purpose the EI addresses the depth and breadth of energy and the energy system, from upstream and downstream hydrocarbons and other primary fuels and renewables, to power generation, transmission and distribution to sustainable development, demand side management and energy efficiency.

The strategic aims of the EI are:

- To promote the role, status and contribution of energy professionals in society and maintain professional standards
- To equip energy professionals with tools to enable their positive contribution to society
- To ensure the availability of good quality energy education and learning provision
- To provide a forum for debate to facilitate the development and dissemination of energy knowledge and good practice
- To enhance public understanding of energy resources and their role in society

Offering learning and networking opportunities to support career development, the EI provides a network to all those studying or working in energy, and a scientific and technical reservoir of knowledge for the industry.

The EI was set up in 2003 as a result of a merger between the Institute of Petroleum (IP) and the Institute of Energy (InstE). Both Institutes had a proud and distinguished heritage developed over many years supporting their particular energy sectors. Increasingly these sectors have converged, creating an integrated global energy market which has been mirrored by the development of the Energy Institute - established to address both the depth and breadth of the subject.

The Energy Institute (Hong Kong Branch) is the local branch of EI established in 1998 and incorporated in 2007 under the Companies Ordinance (Chapter 32) in Hong Kong. As the local branch of EI, our objectives follow the same as EI and promote energy awareness in Hong Kong and professional development of its members.

For and on behalf of
Energy Institute (Hong Kong Branch)



Raymond C.L. FONG
Chairman