

**Written Submission by Professor Timothy W. Tong
to be presented at the Special Meeting of the
LegCo Panel on Environmental Affairs
On 29 April 2011**

**Topic: Impacts of the development of nuclear energy
for local power generation on Hong Kong¹**

Mr Chairman, ladies and gentlemen:

In the aftermath of Fukushima crisis, emotions are high concerning the potential harm nuclear energy can cause when there is a serious accident. It is understandable that many people are calling for the reduction or even elimination of the use of nuclear energy in power generation.

Starting from 1997, power companies in Hong Kong have not been allowed, for environmental reasons, to build new coal-fired plants, and all the local coal-fired power plants will be completely retired by the early 2030s. The question is how can we make up for this by changing the proportions of different fuels from the current fuel mix?

To address our energy needs, the first and foremost action item is energy conservation. I am glad to share with you PolyU's experience. With the adoption of various energy-saving measures for our campus buildings, we have been able to reduce electric power consumption by about 5 % each year in the past four years relative to 2005/06. Hong Kong has many buildings that can adopt similar energy-saving measures and contribute to a lower demand for energy.

¹ Proposed fuel mix revamp (%):

	2009	2020
Coal	54	<10
natural gas	23	40
Nuclear	23	50
Renewable energy	--	3-4

Secondly, we should aggressively explore and promote the use of wind and solar energy. Depending on location, wind energy can be economically competitive with other energy. Solar energy still costs relatively more, but with wider usage in the future and continued development of new technology, the cost of using solar energy is likely to decrease.

The HKSAR Government's proposal to increase the usage of natural gas is a reasonable option because the technology is quite mature. The key is to establish an infrastructure that can support the increased usage of natural gas in Hong Kong.

The reality is that even with the adoption of conservation measures, increased usage of wind and solar energy, as well as increased usage of natural gas for power generation, it is still unlikely that Hong Kong's energy needs can be met in the short term (the next 10 to 20 years). As such, the continued reliance on nuclear power is unavoidable.

I would strongly urge that there be a long term plan to strengthen conservation practices and to increase the use of wind and solar energy so that one day, we could be less dependent on nuclear power.

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