

Examination of Estimates of Expenditure 2010-11  
**CONTROLLING OFFICER'S REPLY TO  
INITIAL WRITTEN QUESTION**

Reply Serial No.

**ENB051**

Question Serial No.

2622

Head : 42 – Electrical and Mechanical Subhead :  
Services Department

Programme : (3) Energy Efficiency and Conservation, and Alternative Energy

Controlling Officer : Director of Electrical and Mechanical Services

Director of Bureau : Secretary for the Environment

Question : Under Matters Requiring Special Attention in 2010-11, the Electrical and Mechanical Services Department will continue research and development works on the application of innovative energy efficiency technologies. In this regard, please provide the following information:

- (a) whether light emitting diode (LED) lighting technology will be included in the research and development works in 2010-11;
- (b) details of the scheduled research and development works on the application of innovative energy efficiency technologies and the expenditure to be incurred in 2010-11; and
- (c) details of the completed research and development works on the application of innovative energy efficiency technologies in 2008-09 and 2009-10 and the expenditure incurred.

Asked by : Hon. SHEK Lai-him, Abraham

Reply :

- (a) The LED lighting technology will be included in the research and development works in 2010-11, as part of the research and development study on new lighting technology for replacing less energy efficient lighting.
- (b) The scheduled research and development works in 2010-11 include studies on electromagnetic induction water treatment technology for air-conditioning plants, scroll compressor technology for air-conditioning systems and new lighting technology for replacing less energy efficient lighting. The estimated expenditure is about \$1.2 million.
- (c) The research and development studies completed in 2008-09 and 2009-10 and the expenditure incurred are summarised below:

Year	Research and development studies	Total cost
2008-09	<ul style="list-style-type: none"><li>● Sun tracking photovoltaic system</li><li>● Oil-free variable speed compressor chiller</li><li>● Refrigerant oil contamination purger</li></ul>	\$2.13 million
2009-10	<ul style="list-style-type: none"><li>● Total hydronic balancing of chilled water circuits</li><li>● Heat pipe application in central air-conditioning system</li><li>● New energy efficient lighting - ceramic metal halide lamp</li></ul>	\$1.27 million

Signature \_\_\_\_\_



Name in block letters \_\_\_\_\_

Chan Hung-cheung, Stephen

Post Title \_\_\_\_\_

Director of Electrical and Mechanical Services

Date \_\_\_\_\_

16 March 2010