

# Building Energy Code – The Way Towards Low Carbon Building

## 建築物能源效益守則 - 邁向低碳建築物

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### Abstract

Climate change has become an unprecedented challenge of human. Being part of the international community, the Government of Hong Kong Special Administrative Region (HKSAR) has been striving to formulate long-term strategies and measures in combating climate change and focusing on a low carbon built environment. One of the effective and proven means to achieve this goal is by promoting energy efficiency in buildings.

Buildings account for about 89% of the total electricity consumption in Hong Kong. To reduce carbon emission, it is imperative to improve energy efficiency in buildings. In connection with this objective, the Electrical & Mechanical Services Department (EMSD) has issued a series of Building Energy Code (BEC) since 1998, covering four key types of building service installations, including lighting, air-conditioning, electrical as well as lift and escalator installations. The BEC stipulates the minimum energy performance standards of these installations. EMSD has also launched the voluntary Hong Kong Energy Efficiency Registration Scheme for Buildings to promote the application of BEC in order to improve the energy efficiency in buildings. However, the participation rate of the private sector to the voluntary Registration Scheme is not promising. As a result, the Government has decided to give a pushing force by mandating compliance with the BEC through legislation.

The public consultation which ended in March 2008 concluded that the mandatory implementation of BEC was in the right direction for promoting energy efficiency and conservation in buildings. Given the general support from the public and various stakeholders, the relevant Buildings Energy Efficiency Bill was introduced into the Legislative Council of HKSAR in December of 2009. The Bill seeks to require specified types of building to comply with the codes of practice promulgated by EMSD concerning the energy efficiency of building service installations as well as energy audits. The Bill was passed by the Legislative Council in November 2010. This paper will give a brief account of this new legislation.

### 摘要

氣候變化是人類現時面對的重大挑戰。作為國際社會的一分子，香港特別行政區（下稱「香港特區」）一直致力於制訂長遠的策略和措施以應對氣候變化，並注重於構建低碳環境。實現這目標的其中一項行之有效的方法就是通過提升建築物的能源效益。

建築物耗電量約佔香港總用電量的89%。要減少香港的碳排放，推動建築物節能是重要的一環。因應這目標，機電工程署（下稱機電署）自1998年起發出一系列的《建築物能源效益守則》（下稱《能源效益守則》），涵蓋四類主要屋宇裝備裝置（包括照明、空調、電力和升降機及自動梯的裝置），當中訂明該等裝置的基本能源效益表現標準，機電署並推出自願參與的香港建築物能源效益註冊計劃，旨在推廣《能源效益守則》的應用。可惜，私營界別參與該註冊計劃的比率一直偏低，所以政府決定以立法手段強制遵守《能源效益守則》。

公眾諮詢於2008年3月完成，而諮詢結果顯示，市民認為強制實施《能源效益守則》，對在建築物推廣能源效益和節約能源方面方向正確。鑑於市民和各界持份者對建議的強制計劃普遍表示支持，有關的《建築物能源效益條例草案》於2009年12月提交香港特區立法會審議。條例草案旨在規定須就若干類型的建築物，遵行機電署所頒布有關主要屋宇裝備裝置能源效益標準及能源審核的守則。該條例草案於2010年11月獲得立法會通過。本文會簡要介紹這項新法例。

### Biography

Ir Ken YEUNG has joined EMSD since obtaining his degree on Bachelor of Electrical Engineering in 1989. In the meantime, he works in the field of building services engineering. He has worked on the design and installation supervision of a wide range of government buildings. Ir YEUNG is now a Senior Building Services Engineer in the Energy Efficiency Office of the Electrical and Mechanical Services Department (EMSD). He is now responsible for the legislation of the mandatory implementation of the Building Energy Code and promotion of energy efficiency.

Ir YEUNG has various professional qualifications, including corporate member of the Hong Kong Institution of Engineers (MHKIE), corporate member of the Institution of Engineering and Technology, UK (MIET), corporate member of the Chartered Institution of Building Services Engineers, UK (MCIBSE) and Chartered Engineer, UK (CEng).