



Low Carbon Hong Kong: Supporting Business to Set Targets Property & Construction Working Group

6 June 2018 Workshop Highlights

Through *Low Carbon Hong Kong: Supporting Business to Set Targets*, a [BEC Climate Change Business Forum Advisory Group](#) initiative, BEC is working with businesses on a sectoral level to set targets and strategies aligned with the goals of the Paris Agreement – net zero emissions by the second half of the century. The current focus is the property & construction sector.

This stage of the project involves a series of workshops backed up by research. The aim is to understand the level of ambition which may be expected of this sector in Hong Kong under the Paris Agreement and to collectively solve problems in setting and achieving ambitious longer term targets. For more background information, please see [BEC's Low Carbon Hong Kong Report: Supporting Business to Set Targets](#).

The third workshop, held on 6 June 2018, focused on existing buildings: retrofitting with energy efficient technologies and energy management. Businesses and experts took the view that current plans, which include planned energy efficiency enhancements, will lead to energy reductions of about 10-15%. Assuming that buildings need to reduce energy consumption by more than 70% by 2050 to meet the goals of the Paris Agreement, this means there is still a 55 – 60% gap in the least. The view was that closing this gap is technologically possible but strategic action by businesses and policy support is vital.

In this workshop, we did not look at improvements in the fabric of buildings or the buildings envelope as this appears to be a complex and expensive process but in time this may have significant potential.

Technologies for Ultra Energy Efficient Buildings

Implementing technologies through retrofits can reduce existing buildings energy consumption by more than 50%, with many technologies expected to yield net monetary savings over their lifetime. This is the conclusion of research done for HKGBC's HK3030 and BEC's Energy Efficient Retrofits Guide.

BEC's **Energy Efficient Retrofits Guide** provides information to help build the case for investing in energy efficiency of buildings. This resource can be accessed [here](#). It has two components:

A Guide: introduces and describes technologies that can achieve carbon and energy savings, explaining the approximate net costs and the payback periods. **Retrofit Calculators:** take specific building parameters inputs and generate tailored information, showing technologies that can bring the most energy savings and their cost effectiveness. The guide includes a manual for the calculators.

Fifteen (15) out of 17 of the technologies examined in the Energy Efficient Retrofits Guide bring net savings if equipment is replaced at end of life; and 12 out of 17 bring savings even if replaced mid-life. To achieve the highest cost savings, it is important to plan and align upgrade works with building and existing equipment lifecycle, and make the most out of existing resources and incentives schemes.

Buildings Energy Management

Hardware is essential to energy saving, but people, processes and the tools that empower them are just as important. Good energy management has been shown to reduce buildings energy consumption by 5-20%. This is about behaviour change on the part of buildings and facility managers and occupants.

Good energy management practices include:

Better Data: provided through hardware such as digital meters, monitors, and sensors.

Better Visibility: data is fed to cloud storage and software platforms, then analysed and visualised.

Better Control: the combination of hardware and software allow more granular and distributed control.

This leads to:

Improved Operations: data and visibility enable identifying and rectifying errors that may lead to excessive and unnecessary energy consumption, and help to avoid repeating mistakes.

Improved Planning: data and transparency provides information that aids planning and developing consensus between people and departments.

Improved Reporting: records tracked through energy management systems can tell stories of achievements. Reporting regularly on energy performance can help to prevent backsliding on progress.

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Business Environment Council Limited (BEC) is an independent, charitable membership organisation, established by the business sector in Hong Kong. Since its establishment in 1992, BEC has been at the forefront of promoting environmental excellence by advocating the uptake of clean technologies and practices which reduce waste, conserve resources, prevent pollution and improve corporate environmental and social responsibility. BEC offers sustainable solutions and professional services covering advisory, research, assessment, training and award programs for government, business and the community, thus enabling environmental protection and contributing to the transition to a low carbon economy.