



The Zero Carbon Building in East Kowloon has set a new standard for green buildings in Hong Kong and galvanised public interest in sustainability. But newer and greener buildings alone will not enable Hong Kong to meet its goal of cutting carbon emissions, writes May Chan Rhodes. The retrofitting of existing estates and widespread adoption of energy-saving measures are likely to be key factors in determining if the city achieves its proposed targets.

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Caption:
John Tsang Chun-wah (centre), Financial Secretary, Carrie Lam Cheng Yuet-ngor (next to Tsang), Chief Secretary for Administration and Wong Kam-sing (right), Secretary for the Environment attend Construction Industry Council grand opening of Zero Carbon Building at Sheung Yuet Road, Kowloon Bay.

ALL ABOARD

FOR A GREENER HONG KONG

May Chan Rhodes

The unveiling of the Zero Carbon Building (ZCB) in East Kowloon has drawn much professional and public attention, as the multi-million dollar project epitomises existing green building methodologies. However, it takes much more than just one innovative building to create a greener Hong Kong.

Sr Oliver Chan Yiu-keung, senior maintenance surveyor at the Housing Authority, who also oversees its research and development division, said an overhaul of property and facility management methods will have a much bigger impact on the environment, as it will change the way Hong Kong's 40,000-odd existing buildings operate. "ZCB has created a talking point about green buildings. However, many of the green features at ZCB are not applicable to existing buildings."

Sr Chan recently published a booklet on green property management practices for the HKIS. "Green buildings should be more about how to incorporate green thinking in every facet of the everyday operation of the property, and every decision concerning the premises," he said.

Once property and facility managers have internalised waste reduction and optimised water and energy as their guiding principles, they will start seeing different windows of opportunity for achieving green property management goals instead of just playing by the book, Sr Chan added.

For example, when it comes to landscaping, it will no longer be just a matter of making the environment green. It also involves choosing and picking local plant species that are drought-

resistant and installing mist irrigation systems instead of the traditional sprinkler model to minimise water usage. In terms of energy-savings, while air-conditioning is an obvious culprit, as it constitutes most of a building's energy expenditure, a green-minded property manager will also be paying attention to the overall picture of how residents use the building's facilities and thinking of creative ways to save energy in other areas, such as lighting and lift management.

"Once we have agreed that energy and water saving, and waste reduction are our priorities, we will stop thinking in silos and start working together to make good decisions that have a long-term impact," said Sr Chan. "For example, we will not only look at price when awarding housing estate management contracts to bidders, but also at their track record of green performance. And when we work with different parties in retrofitting projects, we will be looking at the life cycle of the materials and choose things that last and work together to justify the higher project cost because of the decision."

Sr Chan also urged surveyors and property and facilities management professionals to join forces to share their best practices, as well as liaise with lawmakers and the government with the aim of introducing regulatory changes in the long run. He said the legislative process in and of itself will be a powerful way to educate and engage the public on the concept of green properties and new regulations will bring about multiple changes in people's behaviour.

Sr Kenneth Chan, a professional building and property and facilities management surveyor,

agreed that regulatory measures are one of the most effective ways to induce changes in attitude and behaviour. However, in the meantime, he suggested that both the government and the profession look into how they can work together to promote environmentally-friendly practices in the business world. For example, the Singaporean Government has been collaborating with solar energy panel suppliers and residential property managers to work out a renewable energy solution that is both sustainable and financially viable. It had successfully developed a business model that involved little or no costs for the residents involved in setting up solar energy panels, as their supplier was paid from the energy savings achieved during a certain amount of time. Hong Kong could follow this example by looking into the adaptations that existing buildings need to make in terms of building materials and facilities, along with asking the government to help negotiate similar arrangements with suppliers.

On the other hand, property management firms also have an important role to play by introducing innovations, said Sr Kenneth Chan, who is also the managing director of KC Surveyors. There is always room to introduce new practices as the public becomes more familiar with green buildings. For example, some shopping malls and residential buildings are participating in food waste composting, while other commercial buildings are implementing rainwater irrigation systems for their landscaped gardens.

The key to successfully implementing such changes is to get all stakeholders on the same page and ensure that they take the costs and benefits of their decisions into account. "We are at the forefront of managing properties and facilities," Sr Kenneth Chan said. "We all know that green buildings are a global trend and it is up to us to keep up with the latest skills and knowledge in the industry, to educate the public, and introduce changes to the buildings we manage."

Anissa Wong, Permanent Secretary for the Environment, who was a speaker at the 2015 HKIS Property and Facility Management Division Conference cum 10th Anniversary celebration, said she is optimistic about the outlook for green

building practices in Hong Kong. She pointed out that the government has been introducing statutory benchmarks such as the Buildings Energy Efficiency Ordinance, which mandates both new and existing buildings to comply with the Building Energy Code while undergoing major renovations. It has also invested in energy-efficient infrastructure in its latest development projects, such as the pioneering district cooling system at Kai Tak. A central chiller plant supplies chilled water and conveys it to buildings in the complex via an underground chilled water pipe network for Kai Tak's centralised air-conditioning. "The district cooling system promises energy savings of up to 35 percent compared with conventional air-cooled air-conditioning. People who work at the Kai Tak Development buildings will have the wonderful experience of using the district cooling system. This will make a difference in terms of how people perceive new technology in green buildings," said Wong.

The government has also supported the green building certification scheme developed by the Hong Kong Green Buildings Council. It has adopted the council's voluntary green building labeling scheme, BeamPlus, as a prerequisite for granting gross floor area concessions in new building developments. Another version of BeamPlus has been launched to cater to existing buildings.

When asked if the government will launch more initiatives for existing buildings to further reduce their waste and optimise their water and energy use, Wong said there was no easy answer, as it always involves a give-and-take from various stakeholders. "You can't always rely on government incentives. There is no free lunch in the world; someone always has to pay. For example, when it comes to waste charges, we are hoping to deter wasteful behaviour by creating a direct impact on the waste generators. We also hope to focus on how to make people in the community support it for the sake of sustainability and environmental protection. Ultimately, it is about how we are working together as a community for a common goal."

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齊心協力

共建綠色香港

位於東九龍的零碳天地是香港的環保建築的里程碑，促進了公眾利益的可持續發展。不過，May Chan Rhodes 認為，單憑新型、環保的建築並不能令香港達致減少碳排放的目標，關鍵更在於翻新現有房屋及廣泛推廣節能措施。

May Chan Rhodes

東九龍的零碳天地開幕，項目涉資數百萬元，展現了時下的環保建築方法，引來不少專業人士及公眾紛紛關注。話雖如此，要綠化香港，並非靠一幢創新建築就能一步登天。

陳耀強測量師是房屋委員會的高級屋宇保養測量師，主管發展及建築處。他認為改革物業設施管理政策，勢將改變香港現時四萬多幢建築的管理方式，對環境影響極大。「零碳天地掀起了有關環保建築的議題，但它的不少環保建築特色並不適用於現有樓宇。」

陳耀強測量師近期為香港測量師學會出版了一本有關環保物業管理方案的小冊子。「環保建築的概念，在於如何將環保思維融入日常物業管理工作的各個方面，以及有關物業的每項決策當中。」

陳耀強測量師補充指，管理商一旦以減廢、節水、節能為原則，就會著手物色各種中機遇，推行環保物業管理，絕不墨守成規。

例如，在環境美化工作方面，除了綠化之外，亦要挑選抗旱的本地植物，以霧化灌溉系統代替傳統灑水器，從而減少用水。而在節能方面，冷氣固然是能源開支的頭號元兇，但具備環保觸覺的物業管理商亦會關注住戶使用樓宇設施的整體情況，發揮創新思維，在照明、升降機等其他方面節省能源。

「在以節水、節能、減廢為首要重任後，我們會突破以往的思維，攜手合作，作出具有長遠影響的決策。例如，在批出屋邨管理合約時，我們不但要考慮投標方的報價，亦會著眼於他們以往的環保工作。而在合作進行翻新項目時，我們會關注建築物料的使用壽命，選擇可以長期使用的物料，與各方通力合作，提出理據解釋項目成本的上升。」

陳耀強測量師亦敦促測量師及物業設施管理方面的專業人士分享心得，與立法機構及政府建立聯繫，以促成監管機制的改革為長遠目標。他認為，立法過程本身就是向公眾推廣環保物業理念的有效方式，而新規例亦會改變公眾的做法。



專業樓宇及物業設施管理測量師陳佐堅亦認同，改變態度及習慣的最有效方式之一，就是從監管措施著手。不過，他亦建議政府及業界探討合作空間，在工商界推廣符合環保原則的措施。例如，新加坡政府與太陽能板供應商及住宅物業管理商合作，擬定一個可持續發展且財政上又可行的可再生能源解決方案，從而發展出一種商業模式，讓住戶只需支付少量費用甚至免費安裝太陽能板，而供應商則可在一定時間內節約能源，從而獲利。香港可以借此為鑒，探討如何調整現有建築物的建築物及設施，要求政府協助與供應商磋商有關安排。

陳佐堅測量師亦是陳佐堅測量師行的董事總經理。他表示，物業管理公司在改革過程中亦須扮演重要角色。隨著公眾對環保建築的理解日深，物業管理公司可引入新的方案。例如，部分商場及住宅已實行廚餘堆肥，亦有商業樓宇在園境中引入雨水灌溉系統。

成功落實這些轉變的關鍵，在於讓所有持份者達成共識，並考慮相關決策的成本及利益。「我們在物業設施管理工作的前線。大家都知道，環保建築是全球的大趨勢，我們必須緊貼業內最新的技術和知識，向公眾推廣，在我們所管理的樓宇中引進改變。」

香港測量師學會「2015 年度物業設施管理組研討會暨十周年誌慶」的講者兼環境局常任秘書長王倩儀對香港推行環保建築的前景持樂觀態度。她指出，政府已推行《建築物能源效益條例》等法定標準，規定新建及現有樓宇在進行大型維修工程時須遵守《建築物能源效益守則》。政府亦在最新發展項目中投資興建高能源效益的基建設施，例如在啟德的先進區域供冷系統。啟德的中央冷氣系統由中央冷凍水機組提供冷水，透過地下冷水管系統輸送到各幢樓宇。「相比傳統的冷風式冷氣系統相比，區域供冷系統有望節能最高 35%。在啟德發展區上班的人將可以享用區域供冷系統。這對於公眾理解環保建築內的新技術會有實質影響。」

政府亦支持香港綠色建築議會制訂的綠色建築認證計劃。計劃採用議會的自願性綠色建築認證計劃——綠建環評——作為授予在新建建築發展項目內的總樓面面積寬免的前提。政府亦推出了另一套綠建環評，以滿足有關現有建築的需求。

當被問及政府會否推出更多激勵措施，促使現有建築進一步減廢、節水、節能時，王倩儀表示前景不明朗，涉及各持份者的取捨。

「政府的激勵措施並非萬用良藥。天下沒有免費的午餐，總要有人付出代價。例如，在廢物處理收費方面，我們希望透過從源頭阻遏浪費行為。同時，我們亦希望致力探討如何令公眾從可持續發展及環保角度考慮，從而對此表示支持。歸根結底，關鍵在於我們如何作為一個整體，向著共同目標而通力合作。」

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