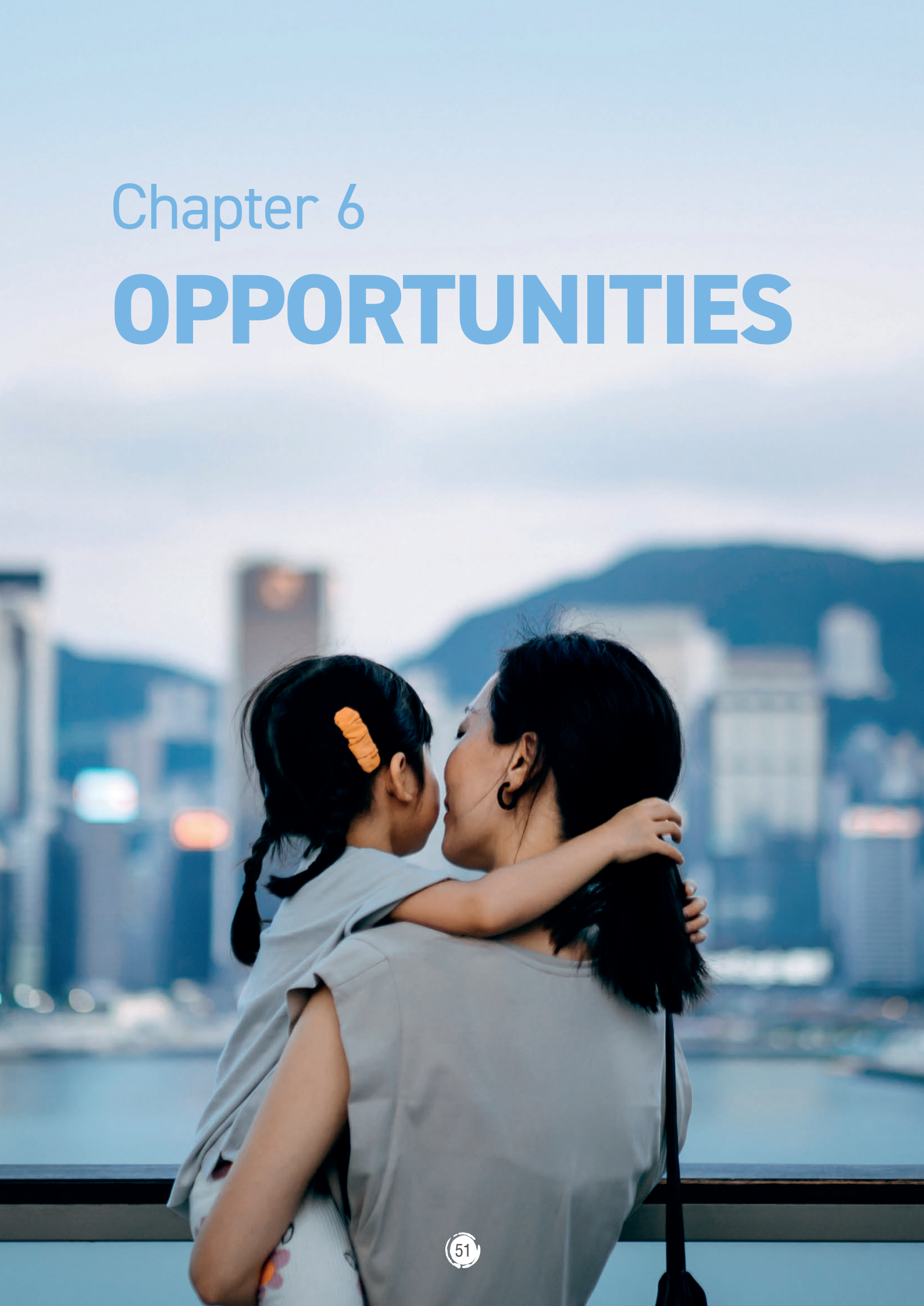
Chapter 6

OPPORTUNITIES



Hong Kong's target to achieve carbon neutrality in less than 30 years will undoubtedly bring a myriad of challenges and difficulties, but it will also open up new opportunities for Hong Kong. Measures to decarbonise and to adapt to climate change will not only bring about sustainable improvement to the environment, but will also drive the development of a green economy, create job opportunities and promote a green recovery. We estimate that the resources to be devoted by the Government in the next few years can create more than 10 000 job opportunities. Hong Kong must grasp the new momentum for growth brought about by the low-carbon transformation, and seize the collaborative opportunities with neighbouring regions to foster more diversified and sustainable development.

Green Economy and Employment Opportunities

6.1 Countries around the world are promoting low-carbon transformation as the awareness of environmental protection among people continue to grow. This is driving the development of a green economy in areas such as the application of new energy, energy saving and environmental protection, new energy vehicles and other green industries, and has brought new investment and plentiful job opportunities. In pursuit of carbon neutrality in Hong Kong, the Government and all sectors of the society will allocate substantial financial resources to formulate and implement measures to promote energy saving, clean energy, green infrastructure, electrification of transport, waste reduction and recycling, etc., which will not only bring about continuous improvement to the environment, but also an array of opportunities in green economy.

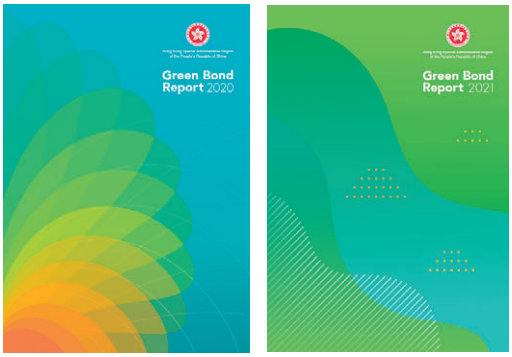
6.2 We estimate that in the next 15 to 20 years, the Government's expenditure on various measures to combat climate change may reach $240 billion. Various private enterprises are also expected to invest heavily in decarbonisation. The enormous demand for financing will accelerate the development of green bonds and other green and sustainable financial products in Hong Kong. Apart from encouraging investment from both the public and private sectors, the decarbonisation transformation will also stimulate and sustain the development of Hong Kong's green economy, support the emergence of green finance technology, expedite circular economy and re-industrialisation, and even create tens of thousands of job opportunities in green industries such as energy supply, recycling, EVs, new energy transport and their supporting industries.

The process of achieving carbon neutrality will stimulate and sustain the development of Hong Kong's green economy

Regional Centre for Green Finance

6.3 The Outline Development Plan for the Guangdong-Hong Kong-Macao Greater Bay Area released in 2019 supported Hong Kong to develop itself into a green finance centre in the GBA and set up internationally recognised green bond certification institutions. The Outline of the 14th Five-Year Plan for National Economic and Social Development of the People's Republic of China and the Long-Range Objectives Through the Year 2035 (the 14th Five-Year Plan) approved this year also reaffirmed its support for Hong Kong to enhance its status as an international financial centre. In recent years, the flourishing green finance business and the increasing demand for green and sustainable financial products have brought new investment opportunities. As an international financial centre, Hong Kong has a large financial market and a sound world-class regulatory framework, bringing together global leading financial and professional institutions, green assessment and certification bodies as well as international investors. With these strengths and advantages, Hong Kong is well placed to develop into a green finance hub in the region and serve as a premier financing platform for green enterprises and projects, and play an important role in combating climate change.

6.4 Huge financial resources are required to achieve carbon neutrality. We should strive to develop various financing tools to attract more funds to projects that can help decarbonisation. The Government launched the GGBP in 2018 to provide funding for Government's green projects. With the support from the LegCo in July 2021, the Government doubled the borrowing ceiling from HK$100 billion to HK$200 billion and expanded the funding scope to a wider variety of green projects not limited to public works projects. We plan to issue green bonds further, totalling some HK$175.5 billion within the next five years from 2021-22, having regard to the market situation. We also plan to pilot the issuance of green bonds that involves more types of currencies, project types and issuance channels, thereby further enriching the green finance ecosystem in Hong Kong. In view of the growing interest of the general public in green and sustainable development, the Government is also planning to issue retail green bonds to provide opportunities for members of the public to take part in green finance, thereby raising public awareness of and interest in green and sustainable finance. The GGBP not only provides funding for Government's green projects, but also consolidates Hong Kong's position as a leading bond market in Asia and a green finance hub in the region.

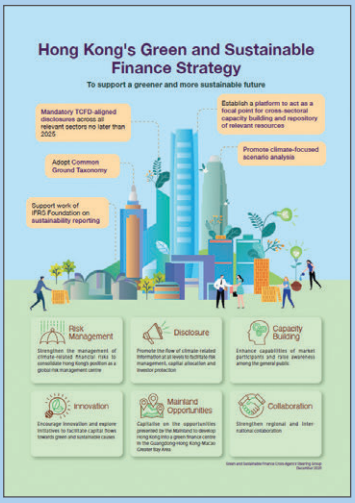


HKSAR Government's Green Bond Reports

As an international financial centre, Hong Kong has the conditions and advantages to develop into a green finance hub in the region

The Green and Sustainable Finance Cross-Agency Steering Group

Established in May 2020, the Green and Sustainable Finance Cross-Agency Steering Group (the Steering Group) is co-chaired by the Hong Kong Monetary Authority and the Securities and Futures Commission, with members comprising ENB, the Financial Services and the Treasury Bureau, Hong Kong Exchanges and Clearing Limited (HKEX), the Insurance Authority and the Mandatory Provident Fund Schemes Authority. The Steering Group aims to coordinate the management of climate and environmental risks to the financial sector, accelerate the growth of green and sustainable finance in Hong Kong and support the Government's climate strategies. The Steering Group will focus its work on climate-related disclosures and sustainability reporting, carbon market opportunities and the work of the Centre for Green and Sustainable Finance, with a view to consolidating Hong Kong's leading position in green and sustainable finance and assist in the transition of the financial ecosystem to carbon neutrality.



Hong Kong's Green and Sustainable Finance Strategy

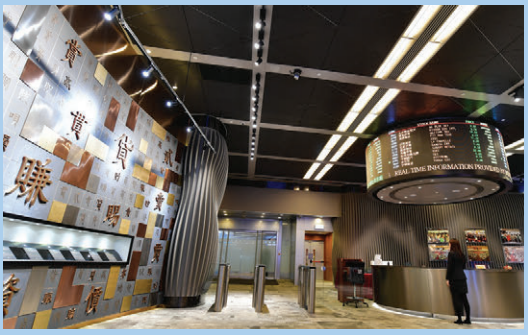
Carbon trading

Carbon markets are expected to grow significantly as the Mainland and other key overseas markets pursue the transition to a green and low-carbon economy. There are currently a number of emission trading systems (ETS) in the world, including the European Union ETS, Tokyo ETS, the eight pilot ETSs in the Mainland (i.e. Beijing, Tianjin, Shanghai, Chongqing, Hubei, Guangdong, Shenzhen and Fujian) and the country's national ETS in Shanghai, which was officially launched in July 2021.

Carbon trading is a pricing tool to set the price for emissions based on market mechanism. It mainly controls the overall emissions by setting emission caps and allowing the market to trade limited emission permits. Voluntary carbon trading markets are mainly based on non-compliance goals such as fulfilling social responsibilities, building brands and expanding social benefits, or the self-motivated trading initiated by individuals to offset their carbon emissions, achieve carbon neutral lifestyle and reduce overall emissions.

The Steering Group has set up a Carbon Market Work Stream to assess the feasibility of developing Hong Kong into a regional carbon trading centre, leveraging its unique advantages in financial services. Based on the existing pilot ETSs in Guangdong, the development of a unified carbon market in GBA will also be explored, having regard to the opportunities presented by both the compliance carbon market and the voluntary carbon market in China and overseas, including the potential size of the carbon product market and policy support needed. The study report is expected to be completed in December 2021.

Moreover, HKEX signed a Memorandum of Understanding with the Guangzhou Futures Exchange (GFEX) in August 2021 for strategic cooperation in promoting sustainability and facilitating the overall development of the GBA. The two parties will focus on supporting the country to peak carbon emissions and reach carbon neutrality, and will jointly explore the feasibility of cooperation on product development in both onshore and offshore markets, facilitate collaboration in areas such as clearing and technology, as well as share the resources on marketing and investor education.



HKEX

Regional Cooperation in Innovation and Technology

6.5 Technological development plays a pivotal role in achieving carbon neutrality. The Government will continue to step up promotion of I&T development and re-industrialisation, encourage R&D on and trial of decarbonisation technologies with a view to facilitating their application in different areas. In 2020, the Government allocated $200 million for setting up the Green Tech Fund to provide better and more focused funding support for R&D projects which can help Hong Kong decarbonise and enhance environmental protection, thereby helping Hong Kong pursue the target of striving to achieve carbon neutrality. While supporting local I&T development, we may also explore growth opportunities through cooperation with neighbouring regions, such as strengthening exchanges and collaboration with cities in the GBA in building low-carbon communities, developing decarbonisation technologies, promoting low-carbon products and nurturing talent.

6.6 The 14th Five-Year Plan promulgated this year has put forward for the first time the support for Hong Kong to develop into a regional intellectual property (IP) trading centre and an international I&T hub, thereby recognising Hong Kong's potential for I&T development; and has named green and environmental protection technology as one of the strategic emerging industries. Hong Kong's international business environment, comprehensive IP protection regime, and well-developed service sectors such as financial, maritime, trading and legal services, have created extremely favourable conditions for developing green technologies. Hong Kong may continue to leverage its diverse strengths and unique position to seek further development. We have been striving to enhance I&T cooperation with the Mainland, including R&D funding schemes and demonstration projects under the theme of green technology. Hong Kong and the adjoining GBA cities may complement one another with their own strengths to achieve synergy, with a view to developing an I&T upstream, midstream and downstream industrial chain, thus contributing to our country's advancement towards carbon neutrality.

6.7 Regional cooperation is also the key to achieving low-carbon electricity generation in Hong Kong. Hong Kong's RE development has been limited by its geographical constraints. To increase the use of zero-carbon energy, we need to cooperate with neighbouring regions to develop more effective zero-carbon energy of a larger scale. With technological advancement and the large-scale development of RE in the Mainland in particular, Hong Kong may explore the feasibility of developing new offshore projects, such as joint ventures in electricity projects by the power enterprises of Hong Kong and the Mainland.

Trial of hydrogen energy for electricity generation

To prepare for the future adoption of new energy for electricity generation, CLP and GE have signed an agreement to jointly explore the feasibility of blending hydrogen and natural gas for electricity generation at Black Point Power Station with a view to using 100% hydrogen as fuel for electricity generation ultimately to support the decarbonisation plan of the power station.

Black Point Power Station

The InnoCell located in the Science Park is Hong Kong's first batch of high-rise building projects adopting MiC method

Green Planning and Carbon-neutral Community

6.8 The cityscape and development approach of Hong Kong is expected to undergo transformation in tandem with the trend towards carbon neutrality. Currently, government departments would, apart from developing housing and community facilities, strive to build low-carbon liveable communities when implementing planned new development areas (NDAs), such as Hung Shui Kiu/Ha Tsuen, Kwu Tung North and Tung Chung New Town Extension. Examples include building DCSs to reduce energy demand; adopting green and sustainable design in buildings as far as possible to reduce energy consumption; providing railway services and installing charging networks for EVs at an early stage; saving energy through proper land use planning and building layout; providing the public with green mobility options, such as walking and cycling; and setting up waste separation and recycling facilities in the community. The two strategic growth areas (SGAs) under planning (i.e. New Territories North and artificial islands in the Central Waters) will indeed adopt the target of carbon neutrality. As Hong Kong continues to switch to clean energy for electricity generation and electrify transport, all NDAs and the two SGAs are aspired to be further enhanced to carbon-neutral communities in the medium and long run.

6.9 In planning for new development areas and urban renewal projects, the choice of design and construction methods should be considered from the environmental perspective to reduce embodied carbon emissions during the construction process. The Government will continue to adopt, and encourage the construction sector to follow suit, Modular Integrated Construction (MiC) method in suitable projects by carrying out most of the operations at construction sites in off-site prefabrication yards, thereby simplifying the construction process and reducing construction wastes. More electrical machinery will also be used at construction sites to reduce carbon emissions and other pollution, with a view to alleviating the impact of buildings on the environment throughout their life cycle.

Fire Services Department Pak Shing Kok Married Quarters in Tseung Kwan O is the first batch of high-rise concrete MiC buildings in Hong Kong

"Hong Kong 2030+: Towards a Planning Vision and Strategy Transcending 2030" (Hong Kong 2030+)

Hong Kong 2030+ represents the Government's staunch commitment to responding to local needs and aspirations and fostering inclusive growth, while capitalising on the opportunities brought by the GBA development and at the same time contributing to a world-class GBA. Our vision for Hong Kong is for it to be a liveable, competitive and sustainable "Asia's World City". At the strategic planning level, Hong Kong 2030+ advocates a capacity-creating approach to ensure sustainable growth. This approach is underpinned by the capacity to create developable land, transport and other essential infrastructure in a visionary manner alongside continuous efforts to enhance environmental capacity. During the planning and development process, the Government will ensure that our city is adequately supported by infrastructure that is smart, green and resilient, thereby providing uninterrupted and convenient services to the community, while at the same time achieving environmental sustainability and a future-proof city. For example, it will foster smart mobility through technologies and strive to explore wider use of RE and waste-to-energy initiatives to help reduce energy consumption and carbon emissions, whilst enhancing the resilience of infrastructure to combat climate change.

The vision of Hong Kong 2030+ is for Hong Kong to be a liveable, competitive and sustainable city

Hong Kong-Shenzhen Innovation and Technology Park

Located in the Lok Ma Chau Loop, the Hong Kong-Shenzhen Innovation and Technology Park has reserved about 30% of its area for greening to complement the ecological environment of the adjacent wetland and bird habitat. The design of the Park is in line with the target of achieving carbon neutrality before 2050 with adoption of smart and environmentally friendly features, such as a solid waste recycling system. A DCS will be built in the Park and it is expected that at least 50 million kWh of electricity can be saved each year upon its full commissioning.

Lok Ma Chau Loop