

LCQ14: Development of green technology

Following is a question by Dr the Hon Tan Yueheng and a written reply by the Secretary for Environment and Ecology, Mr Tse Chin-wan, in the Legislative Council today (June 21):

Question:

There are views pointing out that the Government is committed to consolidating and enhancing Hong Kong's status as an international financial centre, vigorously developing green finance, developing Hong Kong into an innovation and technology (I&T) hub, and increasing the weight of I&T industries in the industry structure of the economy, with the green technology industry having huge development potential. In this connection, will the Government inform this Council:

- (1) whether it has assessed which industries in the green technology industry domain are those in which Hong Kong has leading advantages, and which industries would feature in the next stage of development;
- (2) of the specific measures in place to support the development of green technology on the financial front; and
- (3) as there are views that the Government should build an ecosystem to promote the development of green technology through higher education institutions and scientific research institutes as technology providers, the Hong Kong Science Park as the main incubator for green technology enterprises, large enterprises in Hong Kong as users of green technology, and the Mainland cities of the Guangdong-Hong Kong-Macao Greater Bay Area as important partners in the development of green technology in Hong Kong, of the Government's measures and planning in this regard?

Reply:

President,

Promoting green economy for sustainable development can help Hong Kong develop into a green and liveable city and achieve the targets of reducing total carbon emissions by half from the 2005 level before 2035 in order to attain the goal of carbon neutrality before 2050 by implementing deep decarbonisation. Developing a green economy can also support the development of green finance and technology, promote circular economy and re-industrialisation, and create new investment and job opportunities in related industries, such as the application of new energy, energy conservation, electric vehicles and new energy transport. Having consulted the Innovation, Technology and Industry Bureau (ITIB) and the Financial Services and the Treasury Bureau, the reply to the question is as follows:

- (1) The Government promulgated the Hong Kong Innovation and Technology Development Blueprint (I&T Blueprint) in December 2022, focusing on the

development of technology industries with a competitive edge and of strategic significance to develop in Hong Kong, including the new energy technology industry. The I&T Blueprint also indicated that new energy technology is not only one of the major innovative areas in the new age, it is also a strategic emerging industry put forth in the 14th Five-Year Plan. Advanced new energy technology industries help combat climate change and take forward strategies to achieve the targets of carbon neutrality, so as to promote the development of green industries. The Government is actively exploring the application of new energy in transport and electricity generation to introduce them for testing in Hong Kong when the technologies become relatively mature.

(2) The Government has implemented a number of measures to build a green technology ecosystem. On the provision of funding support for green technology, various funding schemes that support research and development (R&D) under the Innovation and Technology Fund administered by the Innovation and Technology Commission (ITC) have funded about 130 R&D projects related to green technology so far, with a total funding of about \$400 million. The Hong Kong Science and Technology Parks Corporation (HKSTPC) and Cyberport have also set up the Corporate Venture Fund and the Cyberport Macro Fund respectively to co-invest with angel investors or venture capital funds in start-ups in the Hong Kong Science Park and Cyberport on a matching basis, from which green technology can also benefit. In addition, the Green Tech Fund (GTF) administered by the Environment and Ecology Bureau (EEB) provides better and more focused funding support to R&D projects that can help Hong Kong decarbonise and enhance environmental protection. A total of HK\$400 million has been injected into the fund to support projects in priority areas such as net-zero electricity generation, energy saving and green buildings, green transport and waste reduction. The GTF has approved 22 projects from local universities, designated research institutes and private enterprises, involving a total funding of about \$100 million. These projects cover a wide range of topics, including technologies for the cells, storage and generation of hydrogen fuel; manufacturing and application of biochar-enhanced construction materials; and air cleaning system for reducing roadside air pollution.

To promote green transport, the Government has injected a total of \$1.1 billion into New Energy Transport (NET) Fund (previously named as Pilot Green Transport Fund) since 2011 to subsidise the transport trade and charitable/non-profit-making organisations to conduct trials and promote the wider use of innovative green transport technologies. A total of 300 trial projects have been approved under the NET Fund, including various types of electric commercial vehicles and vessels, with a total subsidy of about \$254 million. Apart from "Applications for Trial", a new category "Applications for Use" has been created under the NET Fund to subsidise the trade to directly procure technologies that have been proven to be relatively mature and suitable for local adoption. In addition, a new category has been created under the NET Fund for trial projects on electric taxi charging mode to support the taxi trade to identify the charging options that are most suitable for their operation, with each project's subsidy capped at \$20 million. \$200 million has also been earmarked under the NET Fund for subsidising the trial of hydrogen fuel cell double-deckers and heavy

vehicles. The Government has also set aside \$350 million to provide subsidies to four in-harbour ferry operators for the construction and trials of electric ferries and the associated charging facilities, with a view to testing the technical and commercial viability of adopting electric ferries in Hong Kong. The trials are expected to commence in 2024.

To promote more green projects and corporates (including green technology projects and related corporates) to use the platform in Hong Kong for raising funds, we launched the Green and Sustainable Finance Grant Scheme in 2021 to provide subsidy for eligible bond issuers and loan borrowers to cover their expenses on bond issuance and external review services. As at end May 2023, close to \$180 million have been granted to about 250 green and sustainable debt instruments issued in Hong Kong, involving a total underlying debt issuance of over HK\$600 billion (about US\$80 billion).

In respect of capacity building, a number of local tertiary institutions have been offering undergraduate and postgraduate programmes related to environmental protection to cater for the demand for environmental and green talents in Hong Kong. To help young people seize the career opportunities brought about by the low-carbon transformation, the EEB and the Environmental Protection Department (EPD) have been organising summer internship and mentorship programmes for years. The Graduates Subsidy Programme has also been launched to subsidise private companies and eligible organisations to employ fresh graduates to work in areas related to environmental protection. Moreover, the EPD collaborates with various professional institutions and organisations to provide engineering graduates with internship and training opportunities in environmental engineering. Besides, professional training courses on environmental protection are offered through the GreenPro Training Programme. The ITC has also launched the Reindustrialisation and Technology Training Programme that aims to subsidise local enterprises on a matching basis to train their staff in advanced technologies. Subsidised enterprises came from different industries, many of which are small and medium enterprises. Many subsidised programmes are relevant to environmental protection and sustainable development.

(3) The I&T Blueprint set out four broad development directions that will lead Hong Kong towards the vision of an international innovation and technology (I&T) centre. One of the development directions is to enhance the I&T ecosystem and promote "new industrialisation" in Hong Kong. The ITIB has been enhancing the I&T ecosystem from different aspects, including infrastructure, funding, talent and scientific research, to promote Hong Kong's overall I&T development, including green technology and other technology areas. For example, the HKSTPC and Cyberport provide comprehensive assistance for tech start-ups (including those engaged in green technology) through incubation programmes, including R&D support, mentor coaching and investment matching, with a view to assisting them to transform their R&D outcomes for entry into the market and expand business. Furthermore, green tech enterprises can also benefit from the Technology Talent Admission Scheme, which provides a fast-track arrangement for admitting overseas and Mainland technology talents to undertake R&D work in Hong Kong.

Apart from supporting local I&T development, the Government also explores growth opportunities through co-operation with neighbouring regions, including strengthening exchanges and collaboration with cities in the Guangdong-Hong Kong-Macao Greater Bay Area (GBA) in building low-carbon communities, developing decarbonisation technologies, promoting low-carbon products and nurturing talent. Through the Cleaner Production Partnership Programme launched in collaboration with the Department of Industry and Information Technology of Guangdong Province, the EEB will continue to encourage and subsidise Hong Kong-owned factories in Hong Kong and Guangdong Province to adopt cleaner production technologies and practices, for energy saving and air pollutant emissions reduction, and reduction of waste and wastewater generated from industrial processes, thereby improving the regional environmental quality. Hong Kong will also explore the feasibility of developing new offshore projects and introducing new energy for electricity generation.

To actively seize the opportunities brought by our country's dual carbon strategies, the Government will accelerate the development of Hong Kong into an international centre for green technology and finance and strives to build a green technology ecosystem. Specifically, we will seek to attract top-notch enterprises or start-ups to set up their business, encourage efficient interaction among industry, academia and research sectors to commercialise R&D outcomes, and boost the demand for green technology through policy support. The Government will also promote green finance application and innovation to facilitate green projects to obtain capital more conveniently and flexibly through financial innovations apart from traditional financing channel. Our work will include promoting green certification and alignment with international standards, training for talents, and enhancing the exchange and co-operation with cities in the GBA and international markets.

To implement the above plans, the Government will set up a Green Technology and Finance Development Committee, inviting industry representatives from green technology, green finance and green standard certification, etc. to assist in the formulation of an action agenda for promoting the development of Hong Kong into an international green technology and finance centre. The Government will organise an International GreenTech Week at the end of this year to pool together representatives, enterprises and investors from the green technology industries around the world.