LCQ2: Properties available for data centre use

Following is a question by the Hon Tony Tse and a reply by the Acting Secretary for Innovation, Technology and Industry, Ms Lillian Cheong, in the Legislative Council today (June 5):

Question:

Some members of the innovation and technology sector and the real estate sector have relayed that there is a severe shortage of properties in Hong Kong suitable for hosting higher-tier data centres, including those for supercomputing centres in support of the development of artificial intelligence, thereby undermining the competitiveness and future development of the relevant industries. In this connection, will the Government inform this Council:

(1) whether it has assessed the demand for and supply of properties available for data centre or supercomputing centre use; if so, of the details, and the measures put in place to ensure adequate supply in the market; if not, the reasons for that;

(2) given that while the Government introduced measures in 2012 to encourage the partial conversion of industrial buildings for data centre use, some members of the industry opine that existing industrial buildings are simply not fit for conversion into higher-tier data centres, whether the Government will review the relevant measures and introduce new ones to encourage the demolition and wholesale redevelopment of industrial buildings into data centres or supercomputing centres; and

(3) as there are views pointing out that some building laws and regulations as well as planning standards, such as those pertaining to requirements on the height and load bearing of storeys, fire safety, security, sewage disposal, as well as the numbers of parking spaces, lifts and toilets, may be obsolete for properties to be used as data centres or supercomputing centres, whether the authorities have reviewed the relevant laws and regulations as well as standards; if so, of the outcome?

Reply:

President,

Data centre is a key infrastructure to drive the development of digital economy and technology innovation. To promote the development of data centres in Hong Kong, the Office of the Government Chief Information Officer (OGCIO) set up the Data Centre Facilitation Unit in 2011 to provide one-stop support services to enterprises interested in developing data centres in Hong Kong. The Government had also introduced concessionary land-related measures since

2012 to encourage conversion of IBs (industrial buildings) and use of industrial lots for data centre use.

In consultation with the Development Bureau, my reply to the question raised by the Hon Tony Tse is as follows:

(1) The Hong Kong Innovation and Technology Development Blueprint promulgated in 2022 put forth accelerating the development of new digital infrastructure, encompassing a comprehensive assessment on the planning and development of data centres in Hong Kong. According to the OGCIO's estimation, there was about 800 000 square meters (sq m) of data centre floor area in 2022, and it was expected that the available data centre floor area would increase by over 700 000 sq m by 2026. Currently, there is about 970 000 sq m of data centre floor area, with the supply mainly coming from conversion of parts of existing IBs, redevelopment of the entire IBs, land sold through the Land Sale Programme that can be used for "Information Technology and Telecommunications Industries", and transactions of land on the market. In 2023, the OGCIO also surveyed data centre operators whom indicated a short-to-medium term demand for data centre floor area of approximately 300 000 sq m. Based on the current estimation, together with the existing supply, the total floor area of data centres in Hong Kong is estimated to reach 1.5 million sq m by 2026, which should be able to meet the short-to-medium term demand.

Regarding supercomputing centre facilities, according to the feasibility study on the establishment of Artificial Intelligence Supercomputing Centre (AISC) conducted by a consultant commissioned by the OGCIO in 2023, the total computing capacity of supercomputing facilities (i.e. supply of computing power) in local universities and research centres, etc, (excluding the computing power for individual research projects not to be opened up for use) was estimated to be around 60 petaFLOPS (PFLOPS) at that time. The consultant also made a forecast that the short-to-medium term local demand for supercomputing power would be around 3 000 PFLOPS. Cyberport is making preparation for the establishment of the AISC, the first phase of which is expected to commence operation in the second half of this year at the earliest. It is expected that the AISC will be able to provide a computing power of 3 000 PFLOPS in early 2026 at the earliest, which should broadly meet the estimated demand for supercomputing services in the short-to-medium term.

The Government will continue to identify suitable sites for the development of data centres and supercomputing centres. Potential land sources include the San Tin Technopole, Lau Fau Shan area and Sandy Ridge in the Northern Metropolis. Taking account of the actual supply and demand situations as well as commercial considerations, the market can also make use of the existing concessionary measures and flexibly explore the conversion of suitable sites or premises into data-related facilities to cater for different operational need, scale, tier and design of development. Upon the commissioning of Cyberport's AISC, the Government will also examine ways to further meet Hong Kong's medium-to-long term demand for advanced computing power facilities.

(2) and (3) The Government is committed to promoting data centre development in Hong Kong by implementing various facilitation measures. Since 2012, the Government had introduced two concessionary land measures, namely the exemption of waiver fee for changing part(s) of IBs as data centres (wavier application), and assessing the land premium for the data centre part on the basis of high-tier data centre use and the actual development intensity during lease modification of industrial lots (lease modification application). The Government also, through the relaxation of maximum permissible plot ratio by up to 20 per cent, encourages the redevelopment of eligible old IBs for different uses, including data centre as well as other information technology and telecommunications uses.

As at mid-May 2024, a total of 44 waiver applications for converting the IB floor space into data centre use have been approved. Around 70 per cent of these applications involve the development of high-tier data centres. Moreover, five lease modification applications for redevelopment on industrial lots as high-tier data centres were approved. These waiver applications and lease modification applications are estimated to provide about 300 000 sq m of total floor area for data centres, including over 240 000 sq m for high-tier data centre use. These demonstrate that the prevailing concessionary measures have been effective in encouraging the industry to utilise IB spaces for promoting the development of data centres, including those at higher tiers.

The Government has also disposed of two sites in 2013 and 2018 respectively in Tseung Kwan O that could be developed into high-tier data centres. Moreover, industrial and commercial sites disposed in recent years can also accommodate a wide range of uses, including data centres.

As regards the setting up or construction of data centres, the current applicable planning and building construction regulations do not impose different or higher requirements when compared to other general industrial or commercial uses. Whether a particular premises or site is suitable for conversion into a data centre generally depends on the scale of the facility as required by the developer and data centre operator. Regarding the specific development parameters, design and technical standards of data centres, including floor height, loading, power supply and backup generation facilities, the industry in general also makes reference to the international standards.

To facilitate the development of data centres, apart from the various measures above, we will also provide assistance through the Data Centre Facilitation Unit of the OGCIO, as well as continue to monitor the market development and industry feedback closely, and review the development needs and support measures of data centres from time to time.