

LCQ9: Development of waste-to-energy incinerators

Following is a question by Dr the Hon Lo Wai-kiok and a written reply by the Secretary for Environment and Ecology, Mr Tse Chin-wan, in the Legislative Council today (July 17):

Question:

The 14th Five-Year Plan on Urban Municipal Solid Waste (MSW) Separation and Treatment Facilities Development (the Plan) published by the National Development and Reform Commission and the Ministry of Housing and Urban-Rural Development in May 2021 points out that it is necessary to expedite the progress of constructing MSW separation and treatment facilities, so as to provide the basic safeguards for achieving waste reduction, resource recycling and innocuous treatment, while stressing the adherence of principles such as co-ordinated planning, site-specific planning, market orientation and multi-party co-governance in comprehensively pressing ahead with the construction of MSW incineration facilities in the key cities of the country including those in the Guangdong-Hong Kong-Macao Greater Bay Area (GBA). Regarding the development of waste-to-energy (WtE) incinerators, will the Government inform this Council:

(1) whether it has discussed with the relevant departments of the key cities in GBA on how to jointly take forward the implementation of the Plan through mutual co-ordination and enhanced collaboration; if so, of the details; if not, the reasons for that;

(2) as it is learnt that advanced regions are actively deploying WtE incinerators for waste treatment, while the first and second WtE incinerator projects in Hong Kong (i.e. I•PARK1 and I•PARK2) will only be commissioned next year and 2030 respectively, and by then, the MSW incineration capacity of the two projects will reach 9 000 tonnes per day, which is still lower than the current MSW disposal amount of about 11 100 tonnes per day, whether the authorities will compress the process and allocate additional resources to expedite the construction of I•PARK2; if so, of the details; if not, the reasons for that; and

(3) whether it will expeditiously plan and develop a third WtE incinerator project; if so, of the details; if not, the reasons for that?

Reply:

President,

At present, an average of about 11 100 tonnes of municipal solid waste (MSW) are disposed of at landfills in Hong Kong per day. In the Waste Blueprint for Hong Kong 2035, the Government sets out the vision to move away

from the reliance on landfills for direct disposal of MSW by around 2035. The Government's strategy has two main directions. The first is to mobilise the entire community to practise waste reduction and waste separation for recycling in the upstream to reduce the overall waste disposal amount. The second is to proactively drive the development of downstream waste-to-energy (WtE) facilities for sustainable disposal of the remaining MSW. The Environmental Protection Department (EPD) is working full steam on developing the modern WtE incineration facilities and food waste treatment facilities, with a view to moving away from the reliance on landfill for direct disposal of MSW and transforming waste into useful energy resources. Regarding the development of modern WtE incineration facilities, the Integrated Waste Management Facilities Phase 1 (I•PARK1) currently under construction on an artificial island off Shek Kwu Chau, with target of commissioning in 2025, can handle around 3 000 tonnes of MSW per day. We are also actively planning for the development of the Integrated Waste Management Facilities Phase 2 (I•PARK2), with an expected MSW treatment capacity of about 6 000 tonnes per day. The reply to the question raised by Dr the Hon Lo Wai-kwok is as follows:

(1) To take forward the development of modern WtE incineration facilities, on one hand, we have had multiple exchanges with large-scale waste incineration enterprises in different cities in the Mainland to draw on their vast experience of developing incineration facilities in the Mainland, including nine relevant major enterprises from Beijing, Shanghai and the Mainland cities of the Greater Bay Area (including Shenzhen, Jiangmen, Zhuhai, Huizhou and Foshan), to gather suggestions on construction mode, increasing efficiency and speed, incineration technology and construction of ancillary facilities, etc, for the proposed I•PARK2. Moreover, since Shenzhen is one of the first Mainland cities to achieve treating domestic waste solely by incineration, we have been keeping close contact with the Shenzhen Municipal Government, and exchanging views on expediting the development of the proposed I•PARK2 in Hong Kong with reference to the experience of Shenzhen. The Environment and Ecology Bureau and the EPD have so far made three visits to WtE incineration facilities in Shenzhen to leverage on Shenzhen's fruitful experience.

On the other hand, the "Guangdong-Hong Kong-Macao Greater Bay Area Ecological Environmental Protection Plan" promulgated by the Ministry of Ecology and Environment vigorously promotes the development of a "Zero Waste" Bay Area. With this opportunity, Guangdong and Hong Kong have established a close co-operation and exchange mechanism on environmental issues to jointly explore the capacity and modes for developing a circular economy in the region, leveraging the competitive advantages of the two places, complementing each other's strengths, and jointly developing green industries, green energy and related facilities.

(2) To promote the development of I•PARK2, we are streamlining procedures and synchronising various work, including investigation, technical assessment, developing reference design, drafting tender documents and undertaking relevant statutory procedures. Moreover, we have had multiple exchanges with major overseas and Mainland waste incineration enterprises on how to

accelerate Hong Kong's development of the proposed I•PARK2.

Having consolidated the opinions from the expert team and various large-scale waste incineration enterprises in relation to the actual setting of the proposed I•PARK2 site, the construction period (discounting the circumstances affected by inclement weather) could be approximately shortened from the original estimate of 72 months to 54 months, 25 per cent less or 18 months ahead of the original estimated schedule. With the construction schedule expedited and various advance work synchronised, they expected that the proposed I•PARK2 could be completed about two years earlier than the original estimated schedule. We are also exploring whether financial incentives can be incorporated into the works contract terms to encourage the contractor to expedite works progress.

(3) Apart from constructing I•PARK1 and the proposed I•PARK2, as well as food waste treatment facilities, we will also vigorously promote waste reduction at source and resources circulation, with a view to obviating the need for constructing more large-scale waste incineration facilities. However, to ensure that Hong Kong has the capacity to handle all MSW under all scenarios, we also need to be prepared and plan ahead. Therefore, we are identifying a suitable site in the Northern Metropolis for building an advanced WtE facility to provide, if necessary, the essential waste disposal services for the population thereof in the long run. The specific planning and development timetable for the third advanced WtE facility will depend on the growth of waste generated by population and economic growth in the long run, as well as the amount of waste reduction and recycling. The Government will continue its efforts in promoting waste reduction and recycling and closely monitor the actual situation.