

LCQ9: Development of waste-to-energy incinerators

Following is a question by Dr the Hon Lo Wai-kyok 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.

[LCQ1: Enhancing stability of power supply systems](#)

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

Question:

It is learnt that the frequent occurrence of power supply incidents in recent years has aroused public concern about the stability of the power supply systems of the two power companies and their capability to respond to incidents in a timely manner. In this connection, will the Government inform this Council:

(1) of the number of power supply incidents of the two power companies since

July 2021, with a breakdown by cause (e.g. impact of inclement weather, ageing of facilities and human factors) and the respective percentages; in respect of each incident, the district(s) and the number of customers affected, the time taken from the outage to the full resumption of normal power supply, the manpower deployed for emergency repair, as well as the measures taken for the full resumption of normal power supply;

(2) as it is learnt that in the past three months, the power supply system of CLP Power Hong Kong Limited broke down twice when the Thunderstorm Warning was in force, of the contingency measures put in place by the authorities and the two power companies at the present stage to enhance the capability of the power supply systems to withstand the impact of thunderstorms and other inclement weather conditions, and the relevant measures in the long term; the estimated cost of such measures and whether the cost will be passed on to the customers; and

(3) as there are views that with the Government's promotion of the development of digital infrastructure including data centres and the increasing popularity of electric vehicles in recent years, the demand for power in the community is increasing, whether the Government will, apart from urging the two power companies to enhance the capability of their power supply systems to cope with incidents, consider introducing other proposals to enhance the reliability and stability of power supply?

Reply:

President,

A stable and reliable power supply is very important to the daily lives of the public and every level of economic activities in Hong Kong. Recently, there have been a number of voltage dips and power supply interruption incidents of CLP Hong Kong Power Limited (CLP), and the frequency of these incidents has led to concerns about whether CLP's service quality is on the decline. The Government is of the view that CLP needs to examine its company culture and management system for the entire power supply system to identify the root causes of the problem, make fundamental improvements to reduce the chances of similar incidents in the future, and maintain the stable and reliable power supply that Hong Kong has always been proud of.

On this, the Government has requested CLP to allocate resources for an independent consultant. The Electrical and Mechanical Services Department (EMSD) will be responsible for engaging an independent consultant to conduct a comprehensive examination of the causes of all voltage dips and power supply interruption incidents in the past three years and the capability of the entire power system to withstand the impact of external factors, and provide comprehensive recommendations on how to enhance the stability and reliability of the power supply. The Hongkong Electric Company Limited (HEC) has also pledged to take adequate measures to enhance the capability of power supply systems to withstand adverse weather.

In response to the question raised by Dr the Hon Chow Man-kong, my reply

is as follows:

(1) From July 2021 till now, according to the reporting mechanism established between the EMSD and the two power companies, there were 26 significant power outage incidents in the power system of CLP, and five for HEC. Members may refer to the Annex for details of each incident.

The causes for power outage incidents are mainly classified into external factors (such as adverse weather and third-party interference) and internal factors (such as equipment fault). Among the 26 power outage incidents of CLP, 10 were caused by external factors, accounting for 38 per cent; 15 were caused by internal factors, accounting for 58 per cent; and the cause of one incident is to under review and to be confirmed by the EMSD, accounting for four per cent. Among the five power outage incidents of HEC, three were caused by external factors, accounting for 60 per cent; and two were caused by internal factors, accounting for 40 per cent.

With a view to restoring power supply as soon as practicable after power outage incidents, the two power companies would assess the situation instantly and deploy suitable professionals to the scene to identify the location of the incident and arrange for repair. The power companies would, based on the actual situations, adopt the most appropriate and effective power supply restoration plan, such as emergency repair, remote switching of alternative power, arranging temporary mobile generators and laying temporary power cables.

(2) Regarding measures in response to the increasingly frequent extreme weather, the Director of Electrical and Mechanical Services (DEMS) visited the two power companies earlier to receive briefings on the relevant work of the two power companies. In response to DEMS' requests, the two power companies have pledged to take adequate measures to enhance the capability of power supply systems to withstand adverse weather. CLP stated that it would: (1) further increase manpower and adopt innovative technology to conduct inspections and maintenance of key facilities; (2) install lightning protection systems on some outdoor power facilities and flood prevention devices in electrical substations, as well as expedite renewal of power supply equipment; and (3) carry out a comprehensive review on management of CLP's power supply system. HEC stated that although most of its high-voltage cables are buried underground and are generally not affected by thunderstorm, in light of the more frequent extreme weather recently, HEC has gradually installed bund walls and flooding alarm/sump pump systems in relevant electrical substations which may be affected.

After the voltage dip incident occurred in CLP's 400kV overhead line power supply system connecting Yuen Long and Shenzhen in the early morning on June 23, 2024, the EMSD immediately followed up with CLP on how to enhance the lightning protection capability of power supply system. In addition, the EMSD has established a task force to solemnly follow up on the improvement measures proposed by CLP, with an aim to mitigating the impact of extreme weather on the power supply system. CLP stated that, with a view to ensuring a reliable power supply during peak demand periods, particularly during

scorching summer days with sharply increased demand, CLP will continue to monitor the demand of the power supply system.

Regarding the capital projects of the two power companies to strengthen their power supply systems to withstand adverse weather, the Government has been stringently carrying out the gate-keeping duties under the framework of the Scheme of Control Agreements and scrutinises the capital expenditures of the two power companies to avoid increase in profits through premature, excessive or unnecessary investments, as well as requests the power companies to exercise stringent control over operating costs, with a view to preventing them from passing unnecessary costs onto citizens.

(3) The objectives of the Government's energy policies are to ensure that the energy needs of the community are met safely, reliably and efficiently at reasonable prices, to minimise the environmental impact of energy production and use, and to promote the efficient use and conservation of energy. We keep an open mind to any technically and financially feasible plans which can enhance the reliability and stability of the power supply. In addition to monitoring the performances of the two power companies, we are also actively exploring the enhancement of co-operation with neighbouring regions and the directions of co-operation on zero-carbon energy projects near Hong Kong, as well as identifying more sources of zero carbon energy supplies which will help stabilise tariff in the long run while ensuring stable and clean energy supply for Hong Kong.

Furthermore, the EMSD will continue to monitor the operation of the power companies, including strengthening the routine regulation and inspection of the two power companies' facilities to ensure that the two power companies provide safe and reliable power supply to the public. To further enhance the safety and reliability of the power supply system, the EMSD has requested the two power companies to adopt various innovative technologies to analyse the health conditions of power supply equipment, thereby optimising the efficiency of maintenance work as well as enhancing the reliability of electricity supply.

Thank you.

[CHP reminds public on precautions against heat stroke during very hot weather](#)

The Centre for Health Protection (CHP) of the Department of Health (DH) today (July 17) reminded members of the public, particularly those undertaking outdoor activities, to take heed of necessary measures against

heat stroke and sunburn in very hot weather.

"The public should carry and drink plenty of water to prevent dehydration while engaging in outdoor activities," a spokesman for the CHP said.

"Those engaged in strenuous outdoor activities should avoid beverages containing caffeine, such as coffee and tea, as well as alcohol, as they speed up water loss through the urinary system," the spokesman explained.

"Infants and children, the elderly, pregnant women, those with chronic illnesses such as heart disease or high blood pressure, outdoor/manual workers, and individuals who are overweight are more vulnerable to heat stroke. They should pay special attention," the spokesman added.

The public should adopt the following precautions:

- Wear loose and light-coloured clothing to reduce heat absorption and facilitate sweat evaporation and heat dissipation;
- Avoid vigorous exercise and prolonged activities like hiking or trekking as heat, sweating and exhaustion can place additional demands on the physique;
- Perform outdoor activities in the morning or the late afternoon, if possible;
- For indoor activities, open all windows, use a fan or use air-conditioning to maintain good ventilation;
- Do not stay inside a parked vehicle; and
- Reschedule work to cooler times of the day if feasible. If working in a hot environment is inevitable, introduce shade in the workplace where practicable. Start work slowly and pick up the pace gradually. Move to a cool area for rest at regular intervals to allow the body to recuperate.

â€‹The public should also note the latest and the forecast Ultraviolet (UV) Index released by the Hong Kong Observatory (HKO). When the UV Index is high (6 or above):

- Minimise direct exposure of the skin and the eyes to sunlight;
- Wear long-sleeved and loose-fitting clothes;
- Wear a wide-brimmed hat or use an umbrella;
- Seek a shaded area or put on UV-blocking sunglasses;
- Apply a broad-spectrum sunscreen lotion with a minimum sun protection factor (SPF) of 15, preferably higher. Reapply every two hours if you stay out in the sun, and after swimming, sweating or towelling off; and
- While using DEET-containing insect repellents for personal protection against mosquito-borne diseases, apply sunscreen first, then insect repellent.

â€‹If symptoms develop, such as dizziness, headache, nausea, shortness

of breath or confusion, rest and seek help immediately, and seek medical advice as soon as possible.

â€‹The public may obtain more information from the DH's Health Education Infoline (2833 0111), [heat stroke](#) page and [UV radiation](#) page; the HKO's Dial-a-Weather (1878 200), latest [weather report and forecast](#), [UV Index](#) and weather information for [hiking and mountaineering](#); and [press releases](#) of the Labour Department on precautions against heat stroke for outdoor workers and their employers when the Very Hot Weather Warning is in force.

[Very Hot Weather Warning issued](#)

Attention TV/radio announcers:

Please broadcast the following as soon as possible:

The Hong Kong Observatory has issued the Very Hot Weather Warning.

To prevent heat stroke, avoid prolonged activities outdoors.

If engaged in outdoor work or activities, wear a wide-brimmed hat and light-coloured, loose-fitting clothes. Stay in shaded areas as much as possible.

Drink plenty of water, and avoid beverages containing caffeine or alcohol.

If you feel sick, consult a doctor right away.

[SED speaks on HKDSE examination \(with photo\)](#)

Following is the transcript of remarks by the Secretary for Education, Dr Choi Yuk-lin, at a media session after her visit to Jockey Club Ti-I College to give encouragement to this year's candidates of the Hong Kong Diploma of Secondary Education Examination today (July 17):

Reporter: Are there any factors that led to the increase of the number of top scorers in the examination this year? How effective is the Citizenship and Social Development subject given that it only requires students to pass the subject? Will you worry that students are studying half of the subject? Does

it make it easier for students to achieve top scores?

Secretary for Education: For the C&S (Citizenship and Social Development) subject, we have standards-referenced reporting for assessment. The result doesn't mean that it is easier (for students to achieve good scores) than before. It's not comparable because this is a newly adapted curriculum. We appreciate very much the efforts of teachers and students and that they achieved good scores.

For the factors that led to the good performance this year, we have just finished the optimisation of four core subjects and we have created more space for our students to have the opportunities to choose one or two more elective subjects. They can explore their interests and abilities, and fully develop their potentials. I think this is why they got better results than last year.

(Please also refer to the Chinese portion of the transcript.)

