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### Replies to initial written questions raised by Legislative Council Members in examining the Estimates of Expenditure 2022-23

**Director of Bureau : Secretary for the Environment**

**Session No. : 7**

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**CONTROLLING OFFICER'S REPLY**

**ENB001**

**(Question Serial No. 0165)**

Head: (22) Agriculture, Fisheries and Conservation Department

Subhead (No. & title): (-) Not Specified

Programme: (2) Nature Conservation and Country Parks

Controlling Officer: Director of Agriculture, Fisheries and Conservation  
(Dr LEUNG Siu-fai)

Director of Bureau: Secretary for the Environment

Question:

In recent years, wild pigs have appeared frequently in urban areas and even forage near residential areas, causing nuisance and danger to the residents. Last year, a police officer was attacked by a wild pig in North Point and was severely injured. It is evident that wild pig problem is very serious. From 2019 onwards, the Department had progressively regularised the pilot Capture and Contraception/Relocation Programme (CCRP) which was introduced in 2017. In late 2021, the Department announced new measures targeting wild pigs, including capturing wild pigs in the urban areas regularly for humane dispatch with a view to reducing their population, as well as exploring amendments to the Wild Animals Protection Ordinance (Cap. 170), which includes expanding the feeding ban areas for wild animals and stepping up control of feeding activities. In this connection, would the Government inform this Committee of the following:

- (1) the manpower and expenditures involved in handling wild pigs over the past 3 years;
- (2) the number of wild pigs handled under CCRP over the past 3 years;
- (3) the number of wild pig capture operations conducted since the announcement of the measures and the details of each operation, including the date and location of operation;
- (4) the number of wild pigs captured for humane dispatch since the announcement of the measures; and
- (5) the progress of introducing legislative amendments to the Wild Animals Protection Ordinance (Cap. 170), and whether any specific timetable has been drawn up for introducing such legislative amendments; if so, the details?

Asked by: Hon CHAN Kapui, Judy (LegCo internal reference no.: 1)

Reply:

- (1) The manpower and expenditures involved in wild pig management by the Agriculture, Fisheries and Conservation Department (AFCD) over the past 3 years are tabulated as follows:

<b>Year</b>	<b>Manpower (number of staff)</b>	<b>Total expenditure on wild pig management (\$ million)</b>
2019-20	26	14.5
2020-21	32	17.8
2021-22 (revised estimate)	32	19.1

(2) Figures related to the CCRP over the past 3 years are tabulated as follows:

<b>Year</b>	<b>Number of wild pigs</b>		
	<b>Captured</b>	<b>Administered with contraceptive vaccine or surgically sterilised*</b>	<b>Relocated to countryside</b>
2019-20	293	106	222
2020-21	344	165	270
2021-22 (as at February 2022)	370	109	219

\* The number of wild pigs administered with contraceptive vaccine or surgically sterilised overlaps with that of wild pigs relocated to countryside, as some wild pigs would be relocated after they had been administered with the vaccine or after the surgery.

(3) and (4) Since the announcement of new measures on 12 November 2021, as at February 2022, the AFCD has conducted a total of 34 operations and humanely dispatched a total of 66 wild pigs which caused nuisance near urban and residential areas or posed potential danger to the public. The date and location of operations and number of wild pigs involved are tabulated as follows:

<b>Date of operation</b>	<b>District</b>	<b>Location of operation</b>	<b>Number of wild pigs humanely dispatched</b>
17 Nov 2021	Southern	Shum Wan Road	7
21 Nov 2021	Yau Tsim Mong	Yau Ma Tei Public Cargo Working Area	1
21 Nov 2021	Southern	A gas station at Pokfulam Road	1
28 Nov 2021	Wan Chai	Tin Hau Temple Road	1
30 Nov 2021	Eastern	Pak Fuk Road	2
1 Dec 2021	Southern	A housing estate at Repulse Bay	2
6 Dec 2021	Southern	South Bay Beach	0
13 Dec 2021	Southern	South Bay Beach and Chung Hom Kok Beach	0
15 Dec 2021	Sai Kung	Near Po Lam MTR station	3
16 Dec 2021	Wan Chai	A housing estate on Wong Nai Chung Road	3
16 Dec 2021	Central and Western	Ching Lin Terrace, Kennedy Town	3

<b>Date of operation</b>	<b>District</b>	<b>Location of operation</b>	<b>Number of wild pigs humanely dispatched</b>
23 Dec 2021	Central and Western	Kotewall Road	5
5 Jan 2022	Eastern	Sai Wan Terrace, Tai Koo	2
5 Jan 2022	Southern	Cape D'Aguilar Road	3
6 Jan 2022	Southern	South Bay Beach and Middle Bay Beach	0
8 Jan 2022	Eastern	A housing estate at Sai Wan Ho	1
11 Jan 2022	Wan Chai	A housing estate on Tin Hau Temple Road	1
12 Jan 2022	Sai Kung	Lung Ha Wan Road, Sai Kung	3
13 Jan 2022	Southern	Shek Pai Wan Playground	5
17 Jan 2022	Tai Po	Tai Wo Service Road West, Tai Po	2
20 Jan 2022	Sai Kung	Po Lam Road North	3
20 Jan 2022	Eastern	Mount Parker Road	1
26 Jan 2022	Sai Kung	Kau Sai Chau	4
26 Jan 2022	Central and Western	Hong Kong Zoological and Botanical Gardens	1
27 Jan 2022	Central and Western	Brewin Path Temporary Playground	1
27 Jan 2022	Central and Western	Pollock's Path, The Peak	1
27 Jan 2022	Southern	A housing estate at Aberdeen	1
29 Jan 2022	Sham Shui Po	Cornwall Street Park	1
3 Feb 2022	Sha Tin	Ma Kam Street, Ma On Shan	1
10 Feb 2022	Southern	A school in Stanley	1
14 Feb 2022	Eastern	Mount Parker Road	3
15 Feb 2022	Eastern	Mount Parker Road	1
15 Feb 2022	Eastern	A housing estate at Sai Wan Ho	1
19 Feb 2022	Eastern	Cape Collinson Road	1

The above information has been uploaded to the AFCD's website and will be updated regularly.

- (5) As wild pig nuisance in recent years is largely caused by intentional feeding activities, the AFCD is exploring amendments to the Wild Animals Protection Ordinance (Cap. 170) to expand the feeding ban areas for wild animals and increase the penalties, with a view to stepping up control of feeding activities and enhancing the deterrent effect, thus minimising the pull factor drawing wild pigs to urban areas. The AFCD plans to introduce the legislative amendment proposal and commence the relevant amendment procedure in 2022.

- End -

**CONTROLLING OFFICER'S REPLY**

**ENB002**

**(Question Serial No. 0119)**

Head: (22) Agriculture, Fisheries and Conservation Department

Subhead (No. & title): (-) Not Specified

Programme: (2) Nature Conservation and Country Parks

Controlling Officer: Director of Agriculture, Fisheries and Conservation  
(Dr LEUNG Siu-fai)

Director of Bureau: Secretary for the Environment

Question:

Regarding wild pigs, please advise of the following:

- (a) the projected current population of wild pigs in Hong Kong;
- (b) the number of help-seeking cases and complaints received and total value of property losses as reported by the public in relation to the appearance of wild pigs over the past 3 years (2019-20 to 2021-22);
- (c) the number of operations conducted; the number of wild pigs captured, in which the number of female wild pigs injected with contraceptive vaccines and surgically sterilised; the number of wild pigs relocated to the countryside away from residential areas, and the number of wild pigs euthanised over the past 3 years (2019-20 to 2021-22);
- (d) the expenditures and manpower dedicated to the aforesaid pilot programme and the work in relation to the wild pigs over the past 3 years (2019-20 to 2021-22);
- (e) the number of arrests made and prosecutions instituted in relation to the illegal feeding of wild pigs over the past 3 years (2019-20 to 2021-22) as well as the average, maximum and minimum penalties imposed respectively;
- (f) as the proliferation of wild pigs is still a problem, whether the Government will consider adopting other more aggressive approaches to tackle the problem of overbreeding of wild pigs and conducting a systematic assessment of such fertility trend;
- (g) the number of wild pig carcasses found in Hong Kong and the number of wild pigs captured in each of the past 3 years (2019-20 to 2021-22), and whether the Government has conducted African Swine Fever testing on the said wild pigs;
- (f) whether the Government will implement any new measures to strengthen the work on prevention of the African Swine Fever.

Asked by: Hon HO Chun-yin, Steven (LegCo internal reference no.: 1)

Reply:

- (a) The Agriculture, Fisheries and Conservation Department (AFCD) launched a scheme in 2019 to estimate the number of wild pigs in the countryside using infrared camera traps. In 2020, the scope of the study scheme was extended to

cover more sites and different seasons. It was estimated that there were about 1 800 to 3 300 wild pigs in the countryside all over Hong Kong basing on the wild pig population density at the trial sites.

- (b) The numbers of complaints or help-seeking cases in relation to wild pigs received by the AFCD over the past 3 years are as follows:

<b>Year</b>	<b>Number of cases</b>
2019-20	1 073
2020-21	1 114
2021-22 (as at February 2022)	1 208

The AFCD does not maintain information on the property losses due to nuisance caused by wild pigs as reported by members of the public.

- (c) The AFCD launched the Capture and Contraception/Relocation Programme (CCRP) in late 2017 to vaccinate or sterilise wild pigs caught and relocate them to the countryside where condition permitted. However, the progress of contraception and sterilisation was far from catching up with the reproduction rate of wild pigs. The AFCD's investigation also reveals that once wild pigs are accustomed to being fed by people, they will continually return to the urban or residential areas to seek food from people even if they have been relocated to the countryside. The numbers of wild pig complaints and injury cases have continued to rise over the past few years. To cope with the festering nuisance of wild pigs, under the premises of safeguarding public safety and maintaining public hygiene, the AFCD announced new measures on 12 November 2021 to conduct regular wild pig capture operations, during which veterinary officers will use dart guns to capture target wild pigs for humane dispatch through medicine injection. Figures related to the CCRP and the number of wild pigs humanely dispatched over the past 3 years are tabulated below:

<b>Year</b>	<b>Number of wild pigs</b>			
	<b>Captured</b>	<b>Administered with contraceptive vaccine or surgically sterilised*</b>	<b>Relocated to countryside</b>	<b>Humanely dispatched<sup>^</sup></b>
2019-20	293	106	222	14
2020-21	344	165	270	26
2021-22 (as at February 2022)	370	109	219	98

\* The number of wild pigs administered with contraceptive vaccine or surgically sterilised overlaps with that of wild pigs relocated to countryside, as some wild pigs would be relocated after they had been administered with the vaccine or after the surgery.

<sup>^</sup> Including wild pigs humanely dispatched due to injury.

- (d) The manpower and expenditures involved in the AFCD's wild pig management over the past 3 years are tabulated as follows:

<b>Year</b>	<b>Manpower (number of staff)</b>	<b>Total expenditure on wild pig management (\$ million)</b>	<b>Expenditure involved in CCRP (\$ million)</b>
2019-20	26	14.5	7.2
2020-21	32	17.8	9.4
2021-22 (revised estimate)	32	19.1	8.6

- (e) Kam Shan, Lion Rock and Shing Mun Country Parks, part of Tai Mo Shan Country Park, Tai Po Kau Nature Reserve, a section of Tai Po Road along Caldecott Road and Piper's Hill section of Tai Po Road are specified places under the Wild Animals Protection Ordinance (Cap. 170) at which the feeding of any wild animals is prohibited (feeding ban areas). Any person feeding wild animals in the feeding ban areas shall be liable on conviction to a maximum fine of \$10,000. The AFCD arranges regular patrols in the feeding ban areas and will take prosecution action against anyone who has contravened the prohibition of wild animal feeding, subject to sufficient evidence. The AFCD will, from time to time, review the patrol and enforcement arrangements in the feeding ban areas in accordance with the actual circumstances, including the deployment of additional manpower to conduct enforcement and blitz operations at night and on public holidays where necessary, as well as collaborating with relevant departments to strengthen the combat against illegal feeding of wild animals. The information on the prosecutions against illegal feeding of wild animals (including wild pigs) over the past 3 years is tabulated as follows:

<b>Year</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22 (as at February 2022)</b>
<b>Number of prosecutions instituted*</b>	26	50	111
<b>Number of successful prosecutions</b>	28	31	89
<b>Fine (\$)</b>	1,500-2,000 (average: 1,536)	300-2,000 (average: 559)	200-1,500 (average: 833)

\* Some of the prosecutions instituted in the latter part of the year might be processed in the following year.

- (f) Wild pigs are a native species of Hong Kong. They mainly live in the countryside. Being naturally wary of human beings, they will actively avert contact with humans. However, feeding activities by humans in recent years have changed the habits of some wild pigs and drawn them to the urban or residential areas to seek food from people and cause nuisance. To cope with the nuisance caused by wild pigs, under the premises of safeguarding public safety and maintaining public hygiene, the AFCD announced new measures on 12 November 2021 to conduct regular wild pig capture operations with priority accorded to sites with multiple numbers of wild pigs, areas with past injury cases or areas where wild pigs may pose risks to members of the public.



Furthermore, upon receiving reports about wild pig sightings in urban or residential areas from members of the public or other government departments, the AFCD will also capture and humanely dispatch the wild pigs which pose potential danger or cause nuisance to the public. The AFCD will continue to monitor the situation of wild pig sightings and assess the effectiveness of the strategy in a timely manner. The AFCD aims at minimising nuisance caused by wild pigs near the urban and residential areas at the present stage.

- (g) and (h) Issues regarding African Swine Fever (ASF) and wild pig carcasses as mentioned in the question fall under the purview of the Food and Health Bureau (FHB). Our reply after consulting the FHB is as follows:

The number of wild pig carcasses found in Hong Kong by the Food and Environmental Hygiene Department (FEHD) over the past 3 years is tabulated as follows:

<b>Year</b>	<b>Number of wild pig carcasses found</b>
2019-20	364
2020-21	337
2021-22 (as at January 2022)	474

Regarding the number of wild pigs captured in each year, please refer to the reply to item (c).

With a view to strengthening the surveillance of ASF on local wild pigs, the AFCD has been working with the FEHD on a surveillance programme for ASF on local wild pigs since late 2019, which includes testing for the ASF in wild pig carcasses reported by the FEHD. The programme covers the New Territories and Kowloon as well as other areas found with a large number of wild pig deaths. To enable early detection, the programme also collects samples from humanely dispatched wild pigs for testing for ASF.

The AFCD has been closely monitoring epidemic situation of the ASF and taking corresponding measures in a timely manner. Major measures implemented include:

- (i) devising a surveillance and contingency plan for detecting ASF, including stepping up inspection to all local pig farms and collecting pig samples for ASF virus testing when necessary;
- (ii) advising local pig farmers to implement proper biosecurity measures and providing assistance and loans to facilitate them to acquire appropriate facilities to enhance biosecurity of their pig farms;
- (iii) requesting all local pig farms to step up cleansing and disinfection of vehicles and personnel entering and leaving pig farms;
- (iv) suspending the import of breeders from regions infected by ASF;
- (v) banning the storage or use of kitchen waste, food waste or other food of pork origin as pig feed;
- (vi) commissioning contractors to thoroughly cleanse and disinfect all local pig-carrying trucks at designated positions every time before they leave the Sheung Shui Slaughterhouse and Tsuen Wan Slaughterhouse;

- (vii) strengthening the regulation of local pig-carrying trucks, including restricting each local pig-carrying truck to carry live pigs from a single licensed pig farm to the slaughterhouse per trip to reduce the risk of cross infection between pig farms and setting spill prevention standard for local pig-carrying trucks to minimise the spread of diseases arising from spillage or leakage of pig wastes;
- (viii) liaising with relevant government departments regarding improvement in the collection arrangements for pig waste and carcasses;
- (ix) maintaining close contact with the pig farming sector, organising meetings and seminars with the trade in a timely manner, and raising local pig farmers' knowledge of preventing ASF through producing publicity materials on information about ASF, including posters, videos and guidelines on cleansing and disinfection procedures of pig-carrying trucks, etc. so as to provide local pig farmers with information about the disease, its infection as well as the preventive and control measures that pig farms should heed;
- (x) co-operating with the FEHD in conducting a regular surveillance programme for ASF in local wild pig carcasses and testing samples collected from humanely dispatched wild pigs for ASF to enable early detection; and
- (xi) devising an action plan and providing the necessary equipment for culling of pigs.

The AFCD will remain vigilant and closely monitor the epidemic situation, and will take further measures as appropriate and necessary.

- End -

**CONTROLLING OFFICER'S REPLY**

**ENB003**

**(Question Serial No. 0273)**

Head: (22) Agriculture, Fisheries and Conservation Department

Subhead (No. & title): (-) Not Specified

Programme: (2) Nature Conservation and Country Parks

Controlling Officer: Director of Agriculture, Fisheries and Conservation  
(Dr LEUNG Siu-fai)

Director of Bureau: Secretary for the Environment

Question:

The Agriculture, Fisheries and Conservation Department (the Department) announced in last November that wild pigs appearing in urban areas would be captured and humanely dispatched on a regular basis in order to reduce their population and the nuisance they cause. Please advise this Committee of the following:

- (a) the total numbers of operations conducted and wild pigs humanely dispatched by the Department as well as the expenditure involved;
- (b) the details of the locations where the Department conducted capture operations and humane dispatch of wild pigs as well as the manpower and equipment involved during the aforementioned period;
- (c) the number of reports received by the Department regarding injuries caused by wild pigs since last November; and
- (d) the number of reports received by the Department regarding injuries caused by wild pigs in each of the past 3 years.

Asked by: Hon LAM Kin-fung, Jeffrey (LegCo internal reference no.: 7)

Reply:

- (a) and (b) To cope with the festering nuisance of wild pigs, under the premises of safeguarding public safety and maintaining public hygiene, the Agriculture, Fisheries and Conservation Department (AFCD) announced new measures on 12 November 2021 to conduct regular wild pig capture operations, during which veterinary officers will use dart guns to capture target wild pigs for humane dispatch through medicine injection. In general, 12-15 staff members are required in each operation, and the Police will also help maintain order and control traffic on the scenes when necessary. The AFCD's manpower and expenditure on wild pig management in 2021-22 were 32 staff members and about \$19 million (revised estimate) respectively. As the capture operations and humane dispatch of wild pigs are part of the regular work in wild pig management, there is no separate breakdown of the relevant expenditure.

Under the new measures, the AFCD will accord priority to sites with multiple numbers of wild pigs, areas with past injury cases or areas where wild pigs may pose risks to members of the public. Furthermore, upon receiving reports about wild pig sightings in urban or residential areas from members of the public or other government departments, the AFCD will also capture and humanely dispatch the wild pigs which pose potential danger or cause nuisance to the public. Since the announcement of the new measures in November 2021, as at February 2022, the AFCD has conducted a total of 34 operations and humanely dispatched a total of 66 wild pigs which caused nuisance near urban and residential areas or posed potential danger to the public. The date and location of operations and number of wild pigs involved are tabulated as follows:

<b>Date of operation</b>	<b>District</b>	<b>Location of operation</b>	<b>Number of wild pigs</b>
17 Nov 2021	Southern	Shum Wan Road	7
21 Nov 2021	Yau Tsim Mong	Yau Ma Tei Public Cargo Working Area	1
21 Nov 2021	Southern	A gas station at Pokfulam Road	1
28 Nov 2021	Wan Chai	Tin Hau Temple Road	1
30 Nov 2021	Eastern	Pak Fuk Road	2
1 Dec 2021	Southern	A housing estate at Repulse Bay	2
6 Dec 2021	Southern	South Bay Beach	0
13 Dec 2021	Southern	South Bay Beach and Chung Hom Kok Beach	0
15 Dec 2021	Sai Kung	Near Po Lam MTR station	3
16 Dec 2021	Wan Chai	A housing estate on Wong Nai Chung Road	3
16 Dec 2021	Central and Western	Ching Lin Terrace, Kennedy Town	3
23 Dec 2021	Central and Western	Kotewall Road	5
5 Jan 2022	Eastern	Sai Wan Terrace, Tai Koo	2
5 Jan 2022	Southern	Cape D'Aguilar Road	3
6 Jan 2022	Southern	South Bay Beach and Middle Bay Beach	0
8 Jan 2022	Eastern	A housing estate at Sai Wan Ho	1
11 Jan 2022	Wan Chai	A housing estate on Tin Hau Temple Road	1
12 Jan 2022	Sai Kung	Lung Ha Wan Road, Sai Kung	3
13 Jan 2022	Southern	Shek Pai Wan Playground	5
17 Jan 2022	Tai Po	Tai Wo Service Road West, Tai Po	2
20 Jan 2022	Sai Kung	Po Lam Road North	3
20 Jan 2022	Eastern	Mount Parker Road	1
26 Jan 2022	Sai Kung	Kau Sai Chau	4

<b>Date of operation</b>	<b>District</b>	<b>Location of operation</b>	<b>Number of wild pigs</b>
26 Jan 2022	Central and Western	Hong Kong Zoological and Botanical Gardens	1
27 Jan 2022	Central and Western	Brewin Path Temporary Playground	1
27 Jan 2022	Central and Western	Pollock's Path, The Peak	1
27 Jan 2022	Southern	A housing estate at Aberdeen	1
29 Jan 2022	Sham Shui Po	Cornwall Street Park	1
3 Feb 2022	Sha Tin	Ma Kam Street, Ma On Shan	1
10 Feb 2022	Southern	A school in Stanley	1
14 Feb 2022	Eastern	Mount Parker Road	3
15 Feb 2022	Eastern	Mount Parker Road	1
15 Feb 2022	Eastern	A housing estate at Sai Wan Ho	1
19 Feb 2022	Eastern	Cape Collinson Road	1

The above information has been uploaded to the AFCD's website and will be updated regularly.

- (c) The AFCD received a total of 20 reports regarding injuries caused by wild pigs between November 2021 and February 2022.
- (d) The number of reports received by the AFCD regarding injuries caused by wild pigs over the past 3 years is tabulated as follows:

<b>Year</b>	<b>Number of reports of injuries caused by wild pigs</b>
2019-20	7
2020-21	4
2021-22 (as at February 2022)	29

- End -

**CONTROLLING OFFICER'S REPLY**

**ENB004**

**(Question Serial No. 0065)**

Head: (22) Agriculture, Fisheries and Conservation Department

Subhead (No. & title): (-) Not Specified

Programme: (2) Nature Conservation and Country Parks

Controlling Officer: Director of Agriculture, Fisheries and Conservation  
(Dr LEUNG Siu-fai)

Director of Bureau: Secretary for the Environment

Question:

Over the past 3 years, regarding the efforts in combating illegal trade and smuggling of endangered species, would the Government advise this Committee of the following:

1. the number of operations conducted by the Government to combat illegal trade and smuggling of endangered species as well as the time frame, manpower and expenditure involved in each operation;
2. the quantity of the endangered species seized by the Government in combating illegal trade and smuggling of endangered species every year, the species of plants and animals involved as well as their whereabouts;
3. the number of cases processed by the Government in combating illegal trade and smuggling of endangered species, the respective numbers of persons prosecuted, arrested, convicted and the penalties imposed in each case (please set out cases of ivory smuggling separately);
4. the respective numbers of applications received and licences/certificates issued by the Government every year in connection with the licensing control of international trade in endangered species; and
5. the quantity of ivory forfeited every year; the total quantity of forfeited ivory in stockpile, of which the quantity disposed and its estimated value as well as the manpower and expenditure involved; and how to prevent sellers from falsely purporting/camouflaging new ivory as antique ivory?

Asked by: Hon QUAT Elizabeth (LegCo internal reference no.: 9)

Reply:

- (1) The Agriculture, Fisheries and Conservation Department (AFCD) has been working closely with the Hong Kong Customs and Excise Department (C&ED) and strictly regulating the trade in endangered species through enforcing the Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586) (the Ordinance) which gives effect to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in Hong Kong. The AFCD conducts joint operations with the C&ED at various import and export control points from time to time to combat illegal import and export of endangered species, and they also collaborate with

overseas and Mainland law enforcement agencies through joint operations and intelligence exchange to combat smuggling of endangered species. In addition, all CITES-listed products must be inspected by authorised officers prior to their arrival in or departure from Hong Kong to confirm that the relevant consignment details tally with those in the licences. The AFCD also conducts inspections at markets and shops that might sell endangered species from time to time to detect and deter irregularities. The total number of consignment and market inspections conducted in 2019, 2020 and 2021 were 31 163, 19 476 and 22 309 respectively. Due to the global pandemic, the quantities of endangered species consignments have dropped significantly in 2020 and 2021, resulting in a corresponding decrease in the numbers of consignment inspections.

The manpower and expenditures involved in combating illegal trading and smuggling of endangered species over the past 3 years are tabulated as follows:

<b>Year</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22 (revised estimate)</b>
Expenditure (\$ million)	39.2	42.1	40.0
Manpower (number of staff)	48	48	45

- (2) The endangered species seized in each of the past 3 years involved mainly dried seahorse, timber, American ginseng, orchid, live tortoise/turtle, leather products of reptiles, etc. The quantity of seizure is tabulated as follows:

<b>Year</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Quantity	376 000 kg	279 000 kg	408 000 kg

Endangered species seized during law enforcement actions have been disposed of by the AFCD according to the CITES guidelines. For live animals, the AFCD will seek the advice of the CITES Management Authority of the country of export and return them to the country of export or country of origin if deemed appropriate. For animals of a native species, they will be released to a suitable habitat locally if they are diagnosed to be healthy and fit for release. For animals that are not suitable to be returned to the country of export/country of origin or released to a suitable habitat locally, the AFCD will consider donating them to suitable local or overseas institutes for purposes of education or scientific research. If the physical condition of an animal is not satisfactory, or it is likely to die or be subjected to unnecessary suffering if kept in captivity, it will be disposed of by euthanasia. Regarding specimens of endangered species, the AFCD will consider donating to other CITES Management Authorities, government bodies, schools or non-governmental organisations for training or education purposes or disposing of them by other means that are in line with CITES.

- (3) The statistics on cases involving illegal imports and exports in contravention of the Ordinance over the past 3 years are tabulated as follows:

<b>Year</b>	<b>2019</b>	<b>2020*</b>	<b>2021*</b>
Number of cases	659	276	306
Number of persons arrested	497	128	151
Number of persons prosecuted <sup>#</sup>	226	25	34
Number of persons convicted	199	45	29
Maximum penalty (imprisonment/months)	24	27	6
Maximum penalty (fine/\$)	50,000	300,000	60,000

- \* We estimate that the significant drop in the numbers of cases and persons arrested in 2020 and 2021 was mainly due to the remarkable decrease in the numbers of consignments and visitors amid the global pandemic. Regarding the drop in the numbers of persons prosecuted and convicted, it was mainly due to the remarkable decrease in the number of cases of illegal import/export of endangered species carried by visitors, which have all along had relatively high prosecution and conviction rates.
- # As prosecution takes time, persons prosecuted might not be convicted within the same year.

Among which the number of cases involving ivory is tabulated as follows:

<b>Year</b>	<b>2019</b>	<b>2020*</b>	<b>2021*</b>
Number of cases	23	2	1
Number of persons arrested	21	1	0
Number of persons prosecuted <sup>#</sup>	18	0	0
Number of persons convicted	18	1	0
Maximum penalty (imprisonment)	6 weeks	24 months	N/A
Maximum penalty (fine/\$)	N/A	N/A	N/A

- \* We estimate that the significant drop in the number of cases and the numbers of persons arrested, prosecuted and convicted in 2020 and 2021 was partly due to the remarkable decrease in the numbers of consignments and visitors, especially visitors carrying ivory or ivory products illegally, amid the global pandemic. Moreover, it is estimated that the decrease in the number of relevant cases was also due to the fact that the Government has strengthened the relevant trade control measures in recent years and has proactively publicised to the trade and the public the full banning of local ivory trade by the end of 2021.
- # As prosecution takes time, persons prosecuted might not be convicted within the same year.

- (4) The numbers of applications for licences/certificates received and licences/certificates issued by the AFCD with respect to imports, exports, re-exports and possession of scheduled species under the Ordinance over the past 3 years are tabulated as follows:

<b>Year</b>	<b>Number of applications received</b>	<b>Number of licences/certificates issued*</b>
2019	19 749	19 995
2020	10 897	11 272
2021	13 348	13 429

- \* The number of licences/certificates issued may differ from the number of applications received within the same year as some licences and certificates were issued in respect of the applications submitted at the end of the previous year.

- (5) The quantities of ivory seized in 2019, 2020 and 2021 were 2 058, 0.07 and 1.13 kg respectively. Since 2014, a total of 29.5 tonnes of confiscated ivory have been disposed of by incineration. The existing ivory stockpile under government custody is about 10.5 tonnes. Apart from saving some for scientific, education, enforcement or identification purposes, the incineration of the confiscated ivory will be arranged in batches after completion of the necessary legal procedures. The estimated



expenditure for the disposal of the remaining ivory by incineration is \$70,000 and the manpower required will be absorbed by the existing staff of the AFCD.

The Protection of Endangered Species of Animals and Plants (Amendment) Ordinance 2018 (the Amendment Ordinance) was fully implemented starting from 31 December 2021. Except for antique ivory, the import, re-export, and commercial possession of elephant ivory have been fully banned. Traders possessing antique ivory for commercial purposes must prove that the concerned ivory meets the definition of antique ivory. Examples of acceptable proof of antique ivory include a qualified appraisal or scientifically approved aging methods for determining the origin and year of the article. Since the implementation of the Amendment Ordinance, the AFCD has strengthened its efforts in market inspections, monitoring of online trading platforms and intelligence collection so as to monitor any use of antique ivory for commercial purposes on the market. In case of doubt on whether an ivory article is antique ivory, the AFCD will carry out further appraisals, including the use of radiocarbon dating analysis to determine the age of ivory. If irregularities are detected, the AFCD will take enforcement actions and institute prosecutions.

- End -

**CONTROLLING OFFICER'S REPLY**

**ENB005**

**(Question Serial No. 0150)**

Head: (22) Agriculture, Fisheries and Conservation Department

Subhead (No. & title): (-) Not Specified

Programme: (2) Nature Conservation and Country Parks

Controlling Officer: Director of Agriculture, Fisheries and Conservation  
(Dr LEUNG Siu-fai)

Director of Bureau: Secretary for the Environment

Question:

It is stated in the Matters Requiring Special Attention in 2022-23 that the Agriculture, Fisheries and Conservation Department (AFCD) will implement “measures for enhanced management of wild pigs”. According to the information, part of the increased provision for a full-year effect of vacancies filled in the revised estimate for 2019-20 was used for tackling the increasing nuisance of wild pigs, monkeys and other wildlife. In this connection, would the Government advise on the following:

- (a) the estimated number of wild pigs in each year since the AFCD implemented the Capture and Contraception/Relocation Programme in late 2017, among which the number of wild pigs captured and given contraception/sterilisation treatment and the number of wild pigs relocated, and whether the relocated wild pigs dwell in the designated areas; if not, the reasons for that;
- (b) the amount of resources involved in implementing the aforesaid measures each year;
- (c) the measures to be taken by the Government in 2022-23 to tackle the problems of proliferation and nuisance of wild pigs and the estimated expenditure involved;
- (d) whether any target has been set by the AFCD for controlling the number of wild pigs and the timetable for meeting the target; if not, the reasons for that?

Asked by: Hon TSE Wai-chuen, Tony (LegCo internal reference no.: 25)

Reply:

- (a) The Agriculture, Fisheries and Conservation Department (AFCD) launched a scheme in 2019 to estimate the number of wild pigs in the countryside using infrared camera traps. In 2020, the scope of the study scheme was extended to cover more sites and different seasons. It was estimated that there were about 1 800 to 3 300 wild pigs in the countryside all over Hong Kong basing on the wild pig population density at the trial sites.

The AFCD launched the Capture and Contraception/Relocation Programme (CCRP) in late 2017 to vaccinate or sterilise wild pigs caught and relocate them to the countryside where condition permitted. Figures related to the CCRP over the past 5 years are tabulated as follows:

Year	Number of wild pigs	
	Administered with contraceptive vaccine or surgically sterilised*	Relocated to countryside
2017-18	14	40
2018-19	64	81
2019-20	106	222
2020-21	165	270
2021-22 (as at February 2022)	109	219

\* The number of wild pigs administered with contraceptive vaccine or surgically sterilised overlaps with that of wild pigs relocated to countryside, as some wild pigs would be relocated after they had been administered with the vaccine or after the surgery.

However, the progress of contraception and sterilisation was far from catching up with the reproduction rate of wild pigs. The AFCD's investigation reveals that once wild pigs are accustomed to being fed by people, they will continually return to the urban or residential areas to seek food from people even if they have been relocated to the countryside. The numbers of wild pig complaints and injury cases have continued to rise over the past few years. To cope with the festering nuisance of wild pigs, under the premises of safeguarding public safety and maintaining public hygiene, the AFCD announced new measures on 12 November 2021. For details, please refer to items (c) and (d) below.

- (b) The manpower and expenditures involved in the AFCD's wild pig management over the past 5 years are tabulated as follows:

Year	Manpower (number of staff)	Total expenditure on wild pig management (\$ million)	Expenditure involved in CCRP (\$ million)
2017-18	6	6.8	3.8
2018-19	14	9.9	6.2
2019-20	26	14.5	7.2
2020-21	32	17.8	9.4
2021-22 (revised estimate)	32	19.1	8.6

- (c) and (d)

Wild pigs are a native species of Hong Kong. They mainly live in the countryside. Being naturally wary of human beings, they will actively avert contact with humans. However, feeding activities by humans in recent years have changed the habits of some wild pigs and drawn them to the urban or residential areas to seek food from people and cause nuisance. To cope with the nuisance caused by wild pigs, under the premises of safeguarding public safety and maintaining public hygiene, the AFCD announced new measures on 12 November 2021 to conduct regular wild pig capture operations, during which veterinary officers will use dart guns to capture target wild pigs for humane dispatch through medicine injection. The AFCD will accord priority to sites with multiple numbers of wild pigs, areas with past injury cases or areas where wild pigs may pose risks to members of the public. Furthermore, upon receiving reports about wild pig sightings in urban or residential areas from members of the

public or other government departments, the AFCD will also capture and humanely dispatch the wild pigs which pose potential danger or cause nuisance to the public. Since the announcement of the new measures in November 2021, as at February 2022, the AFCD has conducted a total of 34 operations and humanely dispatched a total of 66 wild pigs which caused nuisance near urban and residential areas or posed potential danger to the public. The AFCD will continue to monitor the situation of wild pig sightings and assess the effectiveness of the strategy in a timely manner. The AFCD aims at minimising nuisance caused by wild pigs near the urban and residential areas at this stage.

Since the announcement and implementation of new measures on 12 November 2021, the AFCD has ceased the CCRP and redeployed the resources to work such as capture and humane dispatch of wild pigs, monitoring of the wild pig populations, education and publicity, etc. It is estimated that the total expenditure on wild pig management as a whole will be kept at around \$19 million in 2022-23.

- End -

**CONTROLLING OFFICER'S REPLY****ENB006****(Question Serial No. 0726)**Head: (39) Drainage Services DepartmentSubhead (No. & title): Not specifiedProgramme: (2) Sewage ServicesControlling Officer: Director of Drainage Services (Alice PANG)Director of Bureau: Secretary for the EnvironmentQuestion:

Regarding the problem of sewage discharge in the New Territories rural areas, will the Government inform this Committee:

1. of the numbers of sewerage projects under planning/in progress/completed in 9 rural areas in the New Territories for last year and this year;
2. whether there is any policy and measure to improve the those unsewered villages; whether the Department has set any internal targets for the number of projects to be completed each year;
3. of the amounts of funding for sewage collection and treatment at the North East New Territories (NENT) Landfill over the past 3 years; of the way in which the Government monitors the relevant work; whether there has been any leakage of sewage resulting in water and soil pollution in the neighbouring areas;
4. whether the commencement and scale of the trunk sewerage project No. 4409DS will be affected by development projects for the Northern Metropolis?

Asked by: Hon CHAN Yuet-ming (LegCo internal reference no.: 6)Reply:

1. The numbers of sewerage projects under planning /in progress/completed in 9 rural areas in the New Territories for last year and this year are as follows:

Sewerage Projects in 9 Rural Areas in the New Territories	No. of Projects		
	Under Planning	In Progress	Completed
From April 2020 to March 2021	34	25	2
From April 2021 to March 2022	31	29	1

2. Premises in rural areas that are currently not yet covered by the public sewerage systems are required to continue using on-site sewage treatment facilities, such as septic

tanks and soakaway systems to treat domestic sewage. Villages that have not yet been included in sewerage works programmes are mainly those located far away from the public sewerage network, scarcely populated or with local residents who did not accept the Government's proposed sewerage arrangement. In future planning, the Government will consider various factors, including level of improvement to the environment, density of village population, acceptability by residents, technical feasibility and cost effectiveness etc., to determine the priority of sewerage expansion programmes for progressive extension of sewage collection network.

3. The design and operation of the North East New Territories (NENT) Landfill comply with stringent international standards and various measures have been adopted to minimise its impact on the surrounding environment. The landfill area is designed and constructed as an enclosed containment incorporating multilayer composite liner system covering the entire area of the site, and gas and leachate generated from the landfill are collected and properly treated. The Environmental Protection Department (EPD) has also put in place a comprehensive and stringent environmental monitoring system. On-site EPD staff are responsible for monitoring the landfill contractor's management and operational performance to ensure compliance with the contractual requirements. Enforcement officers of the Environmental Compliance Division of the EPD also conduct inspections of the relevant facilities at irregular time intervals to check whether the operation of the landfill is in compliance with the relevant environmental legislations. According to records, all the results of leachate surveillance conducted in the NENT Landfill in the past 3 years were in compliance with the contractual and statutory standards. Several months ago, the EPD, together with representatives from Ta Kwu Ling District Rural Committee and members of the Legislative Council, carried out site inspection to investigate suspected contaminated streams in Ta Kwu Ling and collected stream water samples for testing. The operational issues regarding the NENT Landfill were also discussed. Sample analysis results showed that the stream water of nearby villages was not contaminated by the leachate of the NENT Landfill.

Leachate collection and treatment is part of the daily integrated management of the NENT Landfill. There is no separate breakdown of the expenditure involved.

4. Public Works Programme No. 4409DS – “North East New Territories Sewerage System Upgrade” aims to upgrade the sewerage system in the vicinity of Ping Che, Ta Kwu Ling, Man Kam To and Sha Ling so that its handling capacity can be increased to cope with the implementation of the village sewerage programme and the development of other public facilities in the district. The project commenced in October 2021 for completion in 2027. Hence, the project will not be affected by development projects for the Northern Metropolis.

- End -

**CONTROLLING OFFICER'S REPLY**

**ENB007**

**(Question Serial No. 0254)**

Head: (44) Environmental Protection Department

Subhead (No. & title): (000) Operational expenses

Programme: (1) Waste

Controlling Officer: Permanent Secretary for the Environment / Director of Environmental Protection (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

It is stated in the Matters Requiring Special Attention in 2022-23 that the Department will reach out to the community by the Green Outreach to provide on-site support and assistance to residents and property management companies in practising proper source separation of waste and clean recycling, as well as preparing for the implementation of municipal solid waste charging. What are the estimated manpower and expenditure of the Green Outreach?

Asked by: Hon CHAN Chun-ying (LegCo internal reference no.: 32)

Reply:

To strengthen community recycling support, the Environmental Protection Department started to establish the Green Outreach in late 2018 to collaborate closely with community partners to educate the public on the importance of waste reduction at source and assist them to practise proper source separation of waste and clean recycling, as well as to identify proper outlets for recyclables. Since mid-2021, the Green Outreach has extended its scope of service to the 18 districts of Hong Kong, with the staffing being increased to about 200 to date. The expenditure incurred by the Green Outreach in 2022-23 is about \$100 million.

- End -

**ENB008**

**CONTROLLING OFFICER'S REPLY**

**(Question Serial No. 0383)**

Head: (44) Environmental Protection Department

Subhead (No. & title): (000) Operational expenses

Programme: (4) Water

Controlling Officer: Permanent Secretary for the Environment / Director of Environmental Protection (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

To fight the coronavirus epidemic, the Environmental Protection Department and the Drainage Services Department in collaboration with the cross-disciplinary team of the University of Hong Kong have been collecting sewage samples for virus testing in all districts. In this connection, please inform this Committee of the following:

- (a) How many sewage samples have been collected since the fifth wave of the epidemic?
- (b) How many cases have been identified through sewage sampling?
- (c) With regard to sewage sampling, how many samples are screened per day? How are the samples screened?
- (d) What procedures are involved in sewage sampling? What have been done to safeguard the health of the staff?
- (e) What are the manpower and expenditure involved?

Asked by: Hon CHAN Hak-kan (LegCo internal reference no.: 3)

Reply:

- (a) - (c) To fight the coronavirus epidemic, the Environmental Protection Department (EPD) and the Drainage Services Department (DSD) in collaboration with the cross-disciplinary team of the University of Hong Kong (HKU Team) have set up about 154 stationary sewage surveillance points across the territory, covering a population of some 5 million people. In addition, over 1 500 temporary sewage surveillance points have been set up at the upstream of those 154 stationary sewage surveillance points. If positive results are detected at stationary sewage surveillance points, sewage sampling and testing will be arranged at the temporary sewage surveillance points following a risk-based approach to narrow down the target areas for tracing the sources of the virus. In selecting the sewage sampling points, we will consider factors including the sewerage network, population coverage, sampling feasibility and the latest epidemic development in order that we can make the best use of limited resources in achieving the best result in epidemic surveillance and control.



At present, we collect about 110 sewage samples for testing on a daily basis. In general, each stationary sewage surveillance point is sampled once every 2 days, and about 30 sewage samples are taken at temporary sewage surveillance points as required each day. Since the emergence of the fifth wave of the epidemic till now (i.e. from 31 December 2021 to 7 March 2022), the Government has so far collected about 5 500 sewage samples for COVID-19 testing. More than 100 “restriction-testing declaration” operations have been conducted in response to positive sewage testing results and over 10 000 hidden infection cases have been identified.

- (d) Regarding the sewage sampling work, the DSD will select the sampling equipment suitable for the environment of individual sampling points. The sewage sampling procedure includes setting up tents at the sampling points for subsequent sampling in the enclosed tents. The whole process will be overseen by on-site staff and monitored remotely via webcams, and when necessary, temporary traffic diversions will be arranged upon application to the Police. Throughout the sampling procedure, all staff involved will wear appropriate personal protective equipment (including N95 masks, face shields, protective clothing, gloves and shoe covers) and observe personal hygiene and safety.
- (e) For the manpower, the EPD and the DSD have deployed staff from their permanent establishment and recruited retired civil servants to take up the work, and engaged contractors to collect and test sewage samples, etc. Including the HKU Team, there are more than 400 staff participating in the whole sewage surveillance plan.

Starting from October 2020 up to 31 March 2022, the sewage surveillance plan will have incurred a total expenditure of about \$234 million.

- End -

**CONTROLLING OFFICER'S REPLY**

**ENB009**

**(Question Serial No. 0384)**

Head: (44) Environmental Protection Department

Subhead (No. & title): (000) Operational expenses

Programme: (2) Air and Climate Change

Controlling Officer: Permanent Secretary for the Environment / Director of Environmental Protection (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

Regarding vehicle emissions and promoting the use of electric vehicles (EVs), please inform this Committee of the following:

- (a) What are the percentages of the emissions from different types of vehicles in the total vehicle emissions? What is the percentage of vehicle emissions in the total emissions in Hong Kong?
- (b) Please list in tabular form the types and numbers of buses (including electric buses) owned by various franchised bus companies on a yearly basis?
- (c) How many vehicle owners have enjoyed the first registration tax (FRT) concessions in the past 3 years? What is the amount of the concessions? Please set out the number of vehicles granted with the FRT concessions by make.
- (d) How many vehicle owners have enjoyed the FRT concessions granted under the "One-for-One Replacement" Scheme in the past 3 years?
- (e) How many vehicles are owned by government departments? What is the percentage share of EVs? How many vehicles will be procured by government departments this year? Among them, what is the percentage share of EVs? What is the average price of the vehicles?
- (f) The Government has allocated \$120 million to provide over 1 000 additional public EV chargers at government car parks. What are the progress and the details of the scheme?
- (g) What is the effectiveness of the trials under the New Energy Transport Fund? What review measures have been put in place?
- (h) The Government mentioned that it would promote the use of electric public light buses and electric taxis. What are the details and the timetables?
- (i) Does the Government have any plan to test out hydrogen-fuelled vehicles in Hong Kong? If yes, what are the details? If no, what are the reasons?
- (j) The Government is preparing to gradually convert some existing petrol or liquefied petroleum gas filling stations into quick charging stations. What is the progress? Will the Government identify sites to construct hydrogen filling stations?

Asked by: Hon CHAN Hak-kan (LegCo internal reference no.: 4)

Reply:

- (a) The Environmental Protection Department (EPD) compiles the Hong Kong Air Pollutant Emission Inventory every year to analyse the distribution and trends of major air pollution sources in Hong Kong. The vehicle emission inventory for 2020 is still under compilation. The estimated percentages\* of emissions from different types of vehicles in the total vehicle emissions from 2017 to 2019 are tabulated as follows:

Year	Vehicle type	Percentage of air pollutant emissions from vehicles in the total vehicle emissions <sup>#</sup>				
		Respirable suspended particulates (RSP)	Fine suspended particulates (FSP)	Nitrogen oxides (NOx)	Volatile organic compounds (VOC)	Carbon monoxide (CO)
2017 *	Motorcycle	1%	1%	1%	67%	11%
	Taxi	0%	0%	20%	4%	28%
	Private car	6%	6%	3%	14%	24%
	Light goods vehicle	17%	17%	18%	2%	3%
	Medium & heavy goods vehicle	37%	37%	28%	3%	6%
	Private light bus	1%	1%	1%	1%	2%
	Public light bus	8%	8%	4%	7%	20%
	Non-franchised bus	11%	11%	9%	2%	2%
	Franchised bus	19%	19%	17%	1%	4%
Total in 2017		100%	100%	100%	100%	100%
2018 *	Motorcycle	1%	1%	1%	69%	10%
	Taxi	0%	0%	16%	4%	34%
	Private car	6%	6%	2%	14%	24%
	Light goods vehicle	19%	19%	19%	2%	3%
	Medium & heavy goods vehicle	38%	38%	30%	3%	5%
	Private light bus	1%	1%	1%	1%	2%
	Public light bus	3%	3%	3%	6%	17%
	Non-franchised bus	12%	12%	10%	2%	2%
	Franchised bus	20%	20%	17%	1%	4%
Total in 2018		100%	100%	100%	100%	100%
2019	Motorcycle	1%	1%	1%	72%	10%
	Taxi	0%	0%	16%	4%	34%
	Private car	7%	7%	2%	13%	24%
	Light goods vehicle	21%	21%	21%	1%	3%

Year	Vehicle type	Percentage of air pollutant emissions from vehicles in the total vehicle emissions <sup>#</sup>				
		Respirable suspended particulates (RSP)	Fine suspended particulates (FSP)	Nitrogen oxides (NOx)	Volatile organic compounds (VOC)	Carbon monoxide (CO)
	Medium & heavy goods vehicle	33%	33%	28%	2%	4%
	Private light bus	2%	2%	1%	1%	3%
	Public light bus	1%	1%	3%	5%	16%
	Non-franchised bus	12%	12%	10%	1%	2%
	Franchised bus	22%	22%	18%	1%	4%
Total in 2019		100%	100%	100%	100%	100%

# May not add up to 100 due to rounding.

\* To provide more accurate emission data to facilitate the management of air quality, the EPD will constantly update the methodologies to compile emission inventories. By making reference to the practices of international environmental agencies, we will recalculate historical emission inventories whenever emission estimation methods are updated. As the more recent version of EMFAC-HK (version 4.3) is adopted for estimating and recalculating emissions from the Road Transport sector above, the data from 2017 to 2018 will be different from the estimates provided in the past.

The percentages of emissions from vehicles in the total local emissions (except emissions from hill fires) from 2017 to 2019 are tabulated as follows:

Year	Percentage of air pollutant emissions from vehicles in the total local emissions				
	Respirable suspended particulates (RSP)	Fine suspended particulates (FSP)	Nitrogen oxides (NOx)	Volatile organic compounds (VOC)	Carbon monoxide (CO)
2017	10%	12%	20%	21%	52%
2018	9%	11%	18%	22%	53%
2019	9%	11%	16%	23%	50%

(b) The numbers of licensed buses owned by each franchised bus company (FBC) in Hong Kong in the past 3 years are tabulated by vehicle emission standard as follows:

Bus company	Bus Category	Number of buses		
		End of 2019	End of 2020	End of 2021
The Kowloon Motor Bus Company (1933) Limited	Euro II	22	0	0
	Euro III	891	595	368
	Euro IV	93	107	115
	Euro V	2 823	2 846	2 923
	Euro VI (including hybrid bus)	220	442	584

Bus company	Bus Category	Number of buses		
		End of 2019	End of 2020	End of 2021
	Electric bus	16	18	11
	<b>Sub-total</b>	<b>4 065</b>	<b>4 008</b>	<b>4 001</b>
Citybus Limited (Franchise for Hong Kong Island and Cross-Harbour Bus Network)	Euro IV	24	28	28
	Euro V	675	626	633
	Euro VI (including hybrid bus)	47	86	106
	Electric bus	5	4	4
	<b>Sub-total</b>	<b>751</b>	<b>744</b>	<b>771</b>
Citybus Limited (Franchise for the Airport and North Lantau Bus Network)	Euro V	221	183	149
	Euro VI (including hybrid bus)	20	40	39
	<b>Sub-total</b>	<b>241</b>	<b>223</b>	<b>188</b>
New World First Bus Services Limited	Euro III	7	0	0
	Euro IV	38	38	38
	Euro V	528	533	533
	Euro VI (including hybrid bus)	108	115	114
	Electric bus	4	4	3
	<b>Sub-total</b>	<b>685</b>	<b>690</b>	<b>688</b>
Long Win Bus Company Limited	Euro III	18	10	10
	Euro IV	32	18	6
	Euro V	225	206	118
	Euro VI (including hybrid bus)	0	0	119
	Electric bus	4	4	4
	<b>Sub-total</b>	<b>279</b>	<b>238</b>	<b>257</b>
New Lantao Bus Company (1973) Limited	Euro III	13	12	9
	Euro IV	23	18	31
	Euro V	113	113	88
	Euro VI (including hybrid bus)	5	5	5
	Electric bus	2	2	2
	<b>Sub-total</b>	<b>156</b>	<b>150</b>	<b>135</b>

(c) & (d) Over the past 3 years (i.e. during the period from 1 January 2019 to 31 December 2021), there were a total of 16 867 cases in which first registration tax (FRT) concessions were granted for electric vehicles (EVs). Among them, 15 740 were cases under the “One-for-One Replacement” Scheme, involving a total amount of \$3.88 billion.

The number of EVs granted with the FRT concessions by make is tabulated below:

<b>Make</b>	<b>Number of EVs granted with the FRT concessions*</b>
AIDEA	2
AUDI	70
BMW I	106
BYD	22
DAYANG	55
DFSK	18
ENERGICA	4
FAW	1
FIAT	1
HYSTER	1
HYUNDAI	916
JAGUAR	22
JOYLONG	27
KIA	572
KING LONG	1
KOMATSU	1
LEXUS	1
M.G.	32
MAXUS	1
MERCEDES BENZ	510
MINI	8
NISSAN	871
PORSCHE	425
RENAULT	66
RIEJU	12
SHUI CHEONG	1
SILENCE	25
SUITONG	1
SMART	82
STILL	7
TAYLOR DUNN	5
TCM	1
TESLA	12 859
TOYOTA	10
UGBEST	6
VMAX	1
VOLKSWAGEN	123
VOLVO	1
<b>Total</b>	<b>16 867</b>

\* Excluding electric franchised buses as no FRT is required to be paid for franchised buses.

- (e) According to the information provided by the Government Logistics Department, there was a total of 6 863 vehicles in various government departments as at the end of December 2021. Among them, there was a total of 2 414 specialised vehicles (such as refuse collection vehicles), accounting for about one-third of the overall government fleet. However, the choices of electric specialised vehicle models in the market were limited. In respect of cars, there was a total of 1 721 cars in the establishment of the government fleet, among which 143 were EVs, accounting for 8.3% of the total number of cars in the Government.

The various government departments procured a total of 582 vehicles (excluding specialised vehicles) in 2021, among which 386 were cars, including 28 EVs, accounting for 7.3% of the total. The average price of the EVs was \$279,000 each.

- (f) The Government allocated \$120 million in 2019-20 for extending the public EV charging networks at government car parks in 3 years, including the installation of over 1 000 additional medium chargers at the car parks managed by the Transport Department, the Government Property Agency and the Leisure and Cultural Services Department which are open to the public, bringing the total number of public chargers to about 1 800. As at February 2022, about 850 public medium chargers have been installed and are open for public use. The remaining some 350 medium chargers are expected to be installed and come into service by mid-2022. Please refer to the Annex for the selected sites and number of these chargers.

- (g) As at the end of February 2022, the New Energy Transport Fund (NET Fund) has approved a total of 256 trials, involving 190 electric light goods vehicles (LGVs), 27 single-deck electric buses, 5 double-deck electric buses, 4 electric light buses (LBs), 7 electric taxis (e-taxis), 5 electric medium goods vehicles (MGVs), 7 electric motorcycles, 47 hybrid LGVs, 27 hybrid MGVs, 26 hybrid LBs, 2 single-deck hybrid buses, 1 set of solar air-conditioning system for a bus, 4 sets of electric inverter air-conditioning systems for buses, the retrofitting of 3 in-use ferries with a diesel-electric propulsion system to replace their old system and the retrofitting of 1 in-use ferry with a seawater scrubber, with a total subsidy of about \$209 million.

The NET Fund Steering Committee will, having regard to factors such as trial results of technology products and market development, make timely recommendations to the Government on the subsidy level, limits of applications, etc., with a view to encouraging the transport sector to try out and use green innovative transport technologies.

- (h) **Trial scheme for electric public light buses (e-PLBs)**

Having provisionally determined the routes for the trial scheme in 2021, the Government is further studying the feasibility of the individual routes and will liaise and discuss with the public light bus operators concerned the arrangements of the trial scheme. In addition, we invited proposals from EV suppliers interested in supplying e-PLBs at the end of 2021 and are now vetting the proposals received. Given the lead time to develop and manufacture e-PLBs

that suit Hong Kong, it is anticipated that the trial scheme will commence officially in 2023.

### **Trial of e-taxis**

The Government is working with the taxi trade on the trial of e-taxis under the NET Fund, and has approved 4 applications for the trial of e-taxis early this year. We will install by phases no less than 10 dedicated quick chargers in Lantau Island and Sai Kung this year, as well as identify suitable locations (such as taxi stands) across the territory for setting up dedicated charging facilities for taxis to promote wider use of e-taxis. In addition, we have been actively liaising with vehicle suppliers to encourage them to supply suitable e-taxi models for use in Hong Kong. We will keep a close eye on the latest development of e-taxis in the market and the views of the trade to enhance the trial scheme and the charging network of e-taxis.

- (i) & (j) As set out in the Hong Kong's Climate Action Plan 2050 announced in 2021, the Government will collaborate with FBCs and other stakeholders within next 3 years to test out hydrogen fuel cell electric buses and heavy vehicles. The Government is liaising closely with different FBCs and other operators to work out the details of the trial. To cater for the development trend and supporting facilities demand of hydrogen fuel cell EVs, the Environment Bureau will lead an inter-departmental working group to review various implementation issues, including the supply of hydrogen energy, necessary supporting facilities (such as hydrogen filling stations), safety considerations, training of technical personnel, regulation and legislation required, etc., to meet local requirements in an orderly manner.

As for the conversion of petrol or liquefied petroleum gas filling stations into quick charging stations, the Government is currently reviewing a number of petrol filling station (PFS) sites to be re-tendered, which includes studying the feasibility of gradually converting these sites into quick charging stations in the medium and long term. We will also explore the feasibility of developing some larger petrol or liquefied petroleum gas filling station sites under the "single site, multiple use" model for different uses, including mega charging stations for charging various types of EVs simultaneously.

The EPD is currently working on the respective planning work arising from this initiative. We obtained approval from the Town Planning Board in December 2021 to include EV charging in the planned uses of PFS sites. At present, we are in the process of revising the Hong Kong Planning Standards and Guidelines and locating suitable PFS sites for conducting trial runs. We expect that tender invitation will be issued next year for the first PFS site to be converted into a quick charging station.



**Car parks with EV chargers planned to be installed by the Government**

Department	District		Location	No. of EV chargers to be installed
Transport Department	Southern	1	Aberdeen Car Park	44
	Central & Western	2	Kennedy Town Car Park	59*
		3	Rumsey Street Car Park	75
	Kwai Tsing	4	Kwai Fong Car Park	94*
	Eastern	5	Shau Kei Wan Car Park	81
	Wong Tai Sin	6	Sheung Fung Street Car Park	47
	Wan Chai	7	Tin Hau Car Park	124*
	Tsuen Wan	8	Tsuen Wan Car Park	132*
Government Property Agency	Eastern	9	North Point Government Offices	14*
	Central & Western	10	Queensway Government Offices	28*
		11	Sha Tin Government Offices	54*
	North	12	North District Government Offices	11*
	Tuen Mun	13	Tuen Mun Government Offices	22*
	Sai Kung	14	Sai Kung Government Offices	7*
	Sham Shui Po	15	Cheung Sha Wan Government Offices	41#
	Kowloon City	16	Trade and Industry Tower	20*
Leisure and Cultural Services Department	Central & Western	17	Sun Yat Sen Memorial Park	12*
		18	Sun Yat Sen Memorial Park Sports Centre	6*
	Eastern	19	Siu Sai Wan Sports Ground	15*
		20	Island East Sports Centre	19#
	Southern	21	Deep Water Bay Beach	3*
		22	Ap Lei Chau Waterfront Promenade	6*
	Wan Chai	23	Wong Nai Chung Gap Children's Playground	3*
	Kwun Tong	24	Kowloon Bay Park	11*
		25	Ping Shek Playground	10*
		26	Shun Lee Tsuen Park	4*
		27	Lei Yue Mun Municipal Services Building	6*
	Sham Shui Po	28	Lai Chi Kok Park	8#
		29	Sham Shui Po Sports Ground	2*
		30	Cornwall Street Park	2*
		31	Lung Cheung Road Lookout	4*

Department	District		Location	No. of EV chargers to be installed
	Wong Tai Sin	32	Hammer Hill Road Sports Ground	3*
		33	Po Kong Village Road Park	3*
	Yau Tsim Mong	34	Kowloon Park	9
	Islands	35	Tung Chung Municipal Services Building	10*
	Kwai Tsing	36	Tsing Yi Southwest Leisure Building	3*
		37	Tsing Yi Northeast Park	6*
		38	Tsing Yi Sports Ground and Tsing Yi Swimming Pool	3
		39	Kwai Chung Sports Ground	3*
		40	Hing Fong Road Playground	3*
	North	41	Sheung Shui Swimming Pool	3*
		42	North District Sports Ground	8*
		43	Wo Hing Sports Centre	4*
		44	Po Wing Road Sports Centre	3*
		45	Fanling Swimming Pool	5*
	Sai Kung	46	Tseung Kwan O Swimming Pool	4
		47	Tseung Kwan O Sports Ground	2
		48	Tiu Keng Leng Sports Centre	2
	Sha Tin	49	Siu Lek Yuen Road Playground	3*
		50	Sha Tin Sports Ground and Yuen Wo Playground	6*
		51	Sha Tin Jockey Club Swimming Pool and Yuen Wo Road Sports Centre	6
		52	Sha Tin Town Hall	5*
		53	Hong Kong Heritage Museum	11
		54	Ma On Shan Swimming Pool	6*
		55	Ma On Shan Sports Ground	15*
		56	Yuen Chau Kok Complex	10*
		Tai Po	57	Tai Po Sports Ground
	58		Tai Po Complex	5*
	59		Kwong Fuk Park	5*
	Tsuen Wan	60	Shing Mun Valley Swimming Pool	2
		61	Shing Mun Valley Sports Ground	6#
	Tuen Mun	62	Tuen Mun North West Swimming Pool	9
		63	Tuen Mun Swimming Pool	3*
		64	Yau Oi Sports Centre	3

Department	District		Location	No. of EV chargers to be installed
	Yuen Long	65	Yuen Long Swimming Pool	17*
		66	Tin Shui Wai Swimming Pool & Tin Shui Wai Sports Centre	11*
		67	Tin Shui Wai Sports Ground	18*
		68	Tin Yip Road Park	12#
		69	Fung Kam Street Sports Centre	17*

\* All chargers are open for public use.

# Some of the chargers have been installed and are open for public use.

Remark: The number of EV chargers listed in the table is a preliminary estimate and the actual number will be affected by factors such as the power supply available at the venue, the availability of the venue and other restrictions.

- End -

**CONTROLLING OFFICER'S REPLY**

**ENB010**

**(Question Serial No. 0385)**

Head: (44) Environmental Protection Department

Subhead (No. & title): (000) Operational expenses

Programme: (1) Waste

Controlling Officer: Permanent Secretary for the Environment / Director of Environmental Protection (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

Regarding the Producer Responsibility Scheme on Waste Electrical and Electronic Equipment (WPRS), please advise this Committee of the following for the past 3 years:

- (a) What were the Government's annual expenditure and manpower involved?
- (b) What enforcement actions were taken against unlawful disposal of electronic equipment? What were the numbers of successful prosecutions?
- (c) What enforcement actions were taken against sites involved in unlawful waste disposal operation? What were the numbers of successful prosecutions?
- (d) Please set out in tabular form the design capacity of the plant and actual quantity processed in respect of various types of waste regulated electrical equipment (REE).
- (e) Further to the above question, how were the processed materials treated? How many processed materials were treated in Hong Kong and how many of them were exported overseas?
- (f) What were the quantities of waste REE processed by the Government-commissioned operators since the establishment by type of waste REE?
- (g) What was the frequency of collection services provided by the service operators? Within how many days from the day when a request was made would the waste REE be collected on average?
- (h) How many complaints have been received by the Government about the services provided by the service operators?
- (i) How many local licensed operators that process waste REE are there at present? What are their processing capacities?
- (j) The Administration has previously engaged licensed recyclers to provide removal service through open tender. What are the details and expenditure involved?
- (k) Will the Government review the WPRS and include other electrical appliances in the regulation?

Asked by: Hon CHAN Hak-kan (LegCo internal reference no.: 5)

Reply:

- (a) The Producer Responsibility Scheme on Waste Electrical and Electronic Equipment (WPRS) has been fully implemented since 2018, covering regulated electrical equipment (REE) including air-conditioners, refrigerators, washing machines, televisions, computers, printers, scanners and monitors. The Waste Electrical and Electronic Equipment Treatment and Recycling Facility (WEEE·PARK), developed by the Government to underpin the WPRS, was fully commissioned in March 2018. The actual operating costs of WEEE·PARK for the past 3 years are as follows:

Financial Year	Actual operating cost (\$m)
2018-19	165
2019-20	220
2020-21	220

The Waste Management Policy Division of the Environmental Protection Department (EPD) is responsible for handling various waste management policies and projects, such as the producer responsibility schemes on waste electrical and electronic equipment (WEEE), glass beverage containers and plastic beverage containers. There is no breakdown of the expenditure and manpower resources involved in taking forward these schemes.

- (b) The EPD has been vigorously combating fly-tipping activities, especially those involving disposal of construction waste and commercial and industrial waste. Apart from conducting irregular surprise inspections, the EPD has also installed surveillance camera systems at about 180 locations of frequent illegal waste disposal across the territory to facilitate law enforcement. Over the past 3 years, the EPD has successfully instituted prosecutions against 11 cases involved in fly-tipping of e-waste (including summonses and Fixed Penalty Notices). In addition, there are already established arrangements between the EPD and the Food and Environmental Hygiene Department (FEHD). If abandoned REE is found on street, staff of the FEHD will temporarily place such e-waste at designated refuse collection points, and then notify the WEEE·PARK operator to collect and deliver them to WEEE·PARK for proper treatment and recycling.
- (c) The EPD has been combating the illegal activities of e-waste recycling sites through a multi-pronged approach, including regular inspections, proactive ambush operations, inter-departmental enforcement actions, encouraging the public to report such activities and carrying out publicity and education, etc. to enhance law enforcement.

From 1 January 2019 to 31 December 2021, the EPD conducted more than 3 700 inspections at open recycling sites. Among such recycling sites, 7 were involved in illegal disposal of e-waste or the relevant chemical wastes, and the persons-in-charge were convicted and fined a total of \$82,400. Another 4 suspected non-compliance cases were under investigation.

The EPD will continue to inspect and combat recycling sites involved in unlawful disposal of e-waste. Stringent enforcement actions will be taken against any contraventions of the law.

- (d) The design capacity of WEEE·PARK is about 30 000 tonnes per year. If necessary, appropriate adjustment can be made to the processing lines of the plant to increase their capacity to properly treat the waste REE generated locally. The breakdown of waste REE treated by WEEE·PARK over the past 3 years is as follows:

REE type	Amount processed in 2019 (tonnes)	Amount processed in 2020 (tonnes)	Amount processed in 2021 (tonnes)
Washing machine	11 320	10 627	11 175
Refrigerator	4 960	5 498	5 601
Air-conditioner	3 530	3 050	3 551
Television	1 840	2 204	1 764
Computer product	2 330	2 004	1 880
Total	23 980	23 383	23 971

- (e) WEEE are turned into valuable secondary raw materials after treatment at WEEE·PARK. In accordance with the contractual requirements, the WEEE·PARK operator will arrange the transfer of these secondary raw materials to suitable recyclers for recycling. In the past 3 years, an average of roughly 90% of the secondary raw materials were treated in Hong Kong each year, with the remaining about 10% being exported overseas.

- (f) From the implementation of the WPRS on 1 August 2018 up to the end of December 2021, WEEE·PARK processed a total of 78 439 tonnes of waste REE. The breakdown is as follows:

REE type	Amount processed from August 2018 to the end of December 2021 (tonnes)
Washing machine	36 172
Refrigerator	17 719
Air-conditioner	11 101
Television	6 458
Computer product	6 989
Total	78 439

- (g) The breakdown of collection service requests handled by the WEEE·PARK operator over the past 3 years is as follows:

Year	Collection service requests (number)
2019	195 000
2020	215 600
2021	198 300

Regarding the statutory free removal service, the operator has now been able to collect waste REE from customers in 3 working days after receiving service requests from sellers, at the time slot requested by customers, in over 99.9% of the cases. As regards the free collection service outside the statutory removal service (i.e. no new electrical equipment is purchased), the operator is able to collect the waste REE in about 1 week or a shorter time after receiving the telephone appointments in over 99.9% of the cases.

- (h) The numbers of complaints received by the EPD about the services provided by the WEEE·PARK operator over the past 3 years are as follows:

Year	Number of complaints
2019	53
2020	21
2021	26

- (i) As at early March 2022, there are a total of 18 facilities with valid waste disposal licences for e-waste across the territory (including the WEEE·PARK operator). According to the permitted capacity stipulated in the licences, a total of about 136 000 tonnes of waste REE can be processed each year.
- (j) To enable a more balanced development of the recycling industry and encourage market participation in the recycling of WEEE, the EPD conducted an open tender exercise in April 2019 to appoint a recycler with a waste disposal licence for e-waste to provide treatment and recycling services for washing machines collected outside the statutory removal service required under the WPRS for a period of 14 months. Subsequently, another contract for a period of 18 months was awarded in December 2020 through open tendering, with an expected monthly capacity of 150 tonnes on average. EPD pays for the operating costs based on the amount treated each month.
- (k) The 8 types of REE covered by the WPRS already account for the majority of WEEE generated in Hong Kong. The Government will, in light of factors such as the actual experience from the implementation of the WPRS, the market and technological development, consider whether it is necessary to adjust the scope of the WPRS accordingly. The Government will also continue to promote waste reduction at source to the public.

- End -

**CONTROLLING OFFICER'S REPLY**

**ENB011**

**(Question Serial No. 0112)**

Head: (44) Environmental Protection Department

Subhead (No. & title): (-) Not specified

Programme: (2) Air and Climate Change

Controlling Officer: Permanent Secretary for the Environment / Director of Environmental Protection (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

In this Programme, the Environmental Protection Department indicated that it will continue to prepare the trial of retrofitting Euro V double-deck diesel franchised buses with emission reduction systems to reduce emission of nitrogen oxides; continue to prepare a trial scheme for electric public light buses; continue to prepare a pilot scheme for electric ferries; continue to prepare a trial of electric taxis to test the operation and business mode; and prepare a trial of hydrogen fuel cell electric buses and heavy vehicles. In this connection, please advise this Committee of the following:

- a) the progress and achievements of each of the above preparatory work in the past year;
- b) the specific plans and expected progress of the relevant work in the coming year;
- c) the timetables for electric public light buses, electric ferries and electric taxis to come into service, as well as phasing out the corresponding old transport modes; and
- d) whether the number and locations of public charging station planned to be built in the next 3 years will be sufficient for service operators and the public to use.

Asked by: Hon CHAN Kin-por (LegCo internal reference no.: 10)

Reply:

a) & b) **Trial of retrofitting Euro V double-deck diesel franchised buses with emission reduction systems**

A Task Force comprising the Environmental Protection Department (EPD), the Transport Department, franchised bus companies (FBCs) and local experts has been set up to draw up technical specifications and detailed arrangements for the trial, and monitor and evaluate the operational performance and emission reduction performance of the buses retrofitted with the enhanced selective catalytic reduction systems. The trial is expected to commence in mid-2022.

**Trial scheme for electric public light buses (e-PLBs)**

Having provisionally determined the routes for the trial scheme in 2021, we are further studying the feasibility of the individual routes and will liaise and discuss with the public light bus operators concerned the arrangements of the trial scheme.



In addition, we invited proposals from electric vehicle (EV) suppliers interested in supplying e-PLBs at the end of 2021 and are now vetting the proposals received. Given the lead time to develop and manufacture e-PLBs that suit Hong Kong, it is anticipated that the trial scheme will commence officially in 2023.

#### **Pilot scheme for electric ferries (e-ferries)**

The Government is preparing to launch a pilot scheme for e-ferries in 4 in-harbour ferry routes and will provide full subsidies to the ferry operators for the construction of 4 e-ferries and the associated charging facilities, as well as the operational, maintenance and repair expenditures involved for testing the e-ferries during the 24-month trial period.

The Government has established an inter-departmental working group to work out the details of the pilot scheme, oversee its progress and evaluate the performance of the e-ferries. The EPD has also engaged a consultant to design the e-ferries and the associated charging facilities, and assist the ferry operators to prepare technical specifications for issuing open tenders for the construction of e-ferries. The Government has signed subsidy agreements with some of the ferry operators, and will issue tenders for the construction of e-ferries and the associated charging facilities later this year. We anticipate that the pilot scheme will commence in 2023 tentatively.

#### **Trial of electric taxis (e-taxis)**

The Government is working with the taxi trade on the trial of e-taxis under the New Energy Transport Fund, and has approved 4 applications for the trial of e-taxis early this year. We will install by phases no less than 10 dedicated quick chargers in Lantau Island and Sai Kung this year, as well as identify suitable locations (such as taxi stands) across the territory for setting up dedicated charging facilities for taxis to promote wider use of e-taxis. In addition, we have been actively liaising with vehicle suppliers to encourage them to supply suitable e-taxi models for use in Hong Kong. We will keep a close eye on the latest development of e-taxis in the market and the views of the trade to enhance the trial scheme and the charging network of e-taxis.

#### **Trial of hydrogen fuel cell electric buses and heavy vehicles**

As set out in the Hong Kong's Climate Action Plan 2050 announced in 2021, the Government will collaborate with FBCs and other stakeholders within next 3 years to test out hydrogen fuel cell electric buses and heavy vehicles. The Government is liaising closely with different FBCs and other operators to work out the details of the trial. To cater for the development trend and supporting facilities demand of hydrogen fuel cell EVs, the Environment Bureau will lead an inter-departmental working group to review various implementation issues, including the supply of hydrogen energy, necessary supporting facilities, safety considerations, training of technical personnel, regulation and legislation required, etc., to meet local requirements in an orderly manner.

- c) According to the policy direction set out in the Hong Kong Roadmap on Popularisation of Electric Vehicles announced in 2021, the Government will continue to play an active role in developing new energy transport, and will partner

with different sectors in the coming years to actively test the technological and commercial viability of various electric and new energy public transport and commercial vehicles (including e-PLBs, e-ferries and e-taxis), with a view to setting a more concrete way forward and timetable in around 2025.

- d) The Government allocated \$120 million in 2019-20 for extending the public EV charging networks at government car parks in 3 years, including the installation of additional medium chargers at the car parks managed by the Transport Department, the Government Property Agency and the Leisure and Cultural Services Department which are open to the public. Over 1 000 additional public chargers are expected to be in place by the middle of 2022, bringing the total number of public chargers to about 1 800. Please refer to the Annex for the selected sites and numbers of these chargers.

As stated in the Hong Kong Roadmap on Popularisation of Electric Vehicles, the Government's target is to have at least 5 000 public chargers provided by 2025, and it is planning to double the number in future. As at the end of 2021, there are about 4 700 public chargers across the territory. The Government will continue exploring different approaches and install public charging facilities. This includes gradually converting the existing petrol and liquefied petroleum gas filling stations into quick charging stations in the medium to long term as well as examining the feasibility of providing roadside charging facilities, in order to meet the charging needs of the public.

**The number and distribution of EV chargers planned to be installed by the Government**

Department	District		Location	No. of EV chargers to be installed
Transport Department	Southern	1	Aberdeen Car Park	44
	Central & Western	2	Kennedy Town Car Park	59*
		3	Rumsey Street Car Park	75
	Kwai Tsing	4	Kwai Fong Car Park	94*
	Eastern	5	Shau Kei Wan Car Park	81
	Wong Tai Sin	6	Sheung Fung Street Car Park	47
	Wan Chai	7	Tin Hau Car Park	124*
	Tsuen Wan	8	Tsuen Wan Car Park	132*
Government Property Agency	Eastern	9	North Point Government Offices	14*
	Central & Western	10	Queensway Government Offices	28*
		11	Sha Tin Government Offices	54*
	North	12	North District Government Offices	11*
	Tuen Mun	13	Tuen Mun Government Offices	22*
	Sai Kung	14	Sai Kung Government Offices	7*
	Sham Shui Po	15	Cheung Sha Wan Government Offices	41#
	Kowloon City	16	Trade and Industry Tower	20*
Leisure and Cultural Services Department	Central & Western	17	Sun Yat Sen Memorial Park	12*
		18	Sun Yat Sen Memorial Park Sports Centre	6*
	Eastern	19	Siu Sai Wan Sports Ground	15*
		20	Island East Sports Centre	19#
	Southern	21	Deep Water Bay Beach	3*
		22	Ap Lei Chau Waterfront Promenade	6*
	Wan Chai	23	Wong Nai Chung Gap Children's Playground	3*
	Kwun Tong	24	Kowloon Bay Park	11*
		25	Ping Shek Playground	10*
		26	Shun Lee Tsuen Park	4*
		27	Lei Yue Mun Municipal Services Building	6*
	Sham Shui Po	28	Lai Chi Kok Park	8#
		29	Sham Shui Po Sports Ground	2*
		30	Cornwall Street Park	2*

Department	District		Location	No. of EV chargers to be installed
		31	Lung Cheung Road Lookout	4*
	Wong Tai Sin	32	Hammer Hill Road Sports Ground	3*
		33	Po Kong Village Road Park	3*
	Yau Tsim Mong	34	Kowloon Park	9
	Islands	35	Tung Chung Municipal Services Building	10*
	Kwai Tsing	36	Tsing Yi Southwest Leisure Building	3*
		37	Tsing Yi Northeast Park	6*
		38	Tsing Yi Sports Ground and Tsing Yi Swimming Pool	3
		39	Kwai Chung Sports Ground	3*
		40	Hing Fong Road Playground	3*
	North	41	Sheung Shui Swimming Pool	3*
		42	North District Sports Ground	8*
		43	Wo Hing Sports Centre	4*
		44	Po Wing Road Sports Centre	3*
		45	Fanling Swimming Pool	5*
	Sai Kung	46	Tseung Kwan O Swimming Pool	4
		47	Tseung Kwan O Sports Ground	2
		48	Tiu Keng Leng Sports Centre	2
	Sha Tin	49	Siu Lek Yuen Road Playground	3*
		50	Sha Tin Sports Ground and Yuen Wo Playground	6*
		51	Sha Tin Jockey Club Swimming Pool and Yuen Wo Road Sports Centre	6
		52	Sha Tin Town Hall	5*
		53	Hong Kong Heritage Museum	11
		54	Ma On Shan Swimming Pool	6*
		55	Ma On Shan Sports Ground	15*
		56	Yuen Chau Kok Complex	10*
	Tai Po	57	Tai Po Sports Ground	3*
		58	Tai Po Complex	5*
		59	Kwong Fuk Park	5*
	Tsuen Wan	60	Shing Mun Valley Swimming Pool	2
		61	Shing Mun Valley Sports Ground	6#
	Tuen Mun	62	Tuen Mun North West Swimming Pool	9
		63	Tuen Mun Swimming Pool	3*
		64	Yau Oi Sports Centre	3

Department	District		Location	No. of EV chargers to be installed
	Yuen Long	65	Yuen Long Swimming Pool	17*
		66	Tin Shui Wai Swimming Pool & Tin Shui Wai Sports Centre	11*
		67	Tin Shui Wai Sports Ground	18*
		68	Tin Yip Road Park	12#
		69	Fung Kam Street Sports Centre	17*

\* All chargers are open for public use.

# Some of the chargers have been installed and are open for public use.

Remark: The number of EV chargers listed in the table is a preliminary estimate and the actual number will be affected by factors such as the power supply available at the venue, the availability of the venue and other restrictions.

- End -

**CONTROLLING OFFICER'S REPLY**

**ENB012**

**(Question Serial No. 0423)**

Head: (44) Environmental Protection Department

Subhead (No. & title): (000) Operational expenses

Programme: (2) Air and Climate Change

Controlling Officer: Permanent Secretary for the Environment / Director of Environmental Protection (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

It is stated in the Budget that an additional sum of \$1.5 billion will be injected to the EV-charging at Home Subsidy Scheme to extend the scheme for four years to the 2027-28 financial year. The scheme will support the installation of electric vehicle charging-enabling infrastructure for a total of about 140 000 parking spaces in some 700 existing private residential buildings. In this connection, please inform this Committee of the following:

- (1) Since the launch of the EV-charging at Home Subsidy Scheme in October 2020, what are the numbers of applications received and approved by the Government, as well as the number of parking spaces and the total amount of funding involved? What are the number of applications rejected and the main reasons for the rejections?
- (2) What factors have been taken into consideration when deciding on the injection of an additional sum of \$1.5 billion to the scheme? If responses are enthusiastic, would additional injection be considered?

Asked by: Hon CHAN Siu-hung (LegCo internal reference no.: 2)

Reply:

- (1) The Government launched the \$2 billion EV-charging at Home Subsidy Scheme (EHSS) in October 2020 to promote installation of electric vehicle charging-enabling infrastructure (EVCEI) in car parks of existing private residential buildings. Up to the end of February 2022, the Environmental Protection Department has received over 560 applications (involving about 115 000 parking spaces) from the 18 districts across the territory, among which 250 applications (involving about 59 000 parking spaces) were approved and 7 applications were rejected due to ineligibility for the EHSS. The tendering exercises for the first batch of over 220 applications have been progressively initiated to procure the services of a consultant to design and subsequently supervise the installation works of the EVCEI. Some of the applicants can proceed with procuring the services of a contractor starting from the first quarter of this year and their installation works of the EVCEI are expected to be gradually completed starting from the end of this year. The actual number of parking spaces to

be covered by the EVCEI installed in the car parks and the amount of subsidy to be granted will be available after completion of the installation works.

- (2) Given the overwhelming response, we proposed to inject an additional sum of \$1.5 billion to extend the EHSS for 4 years to the 2027-28 financial year, so that the whole EHSS would support the installation of EVCEI for a total of about 140 000 parking spaces in some 700 existing private residential building car parks, accounting for about half of the eligible parking spaces in Hong Kong. We will conduct a review again according to the market response and development before the extended EHSS is completed.

- End -

**ENB013**

**CONTROLLING OFFICER'S REPLY**

**(Question Serial No. 0424)**

Head: (44) Environmental Protection Department

Subhead (No. & title): (000) Operational expenses

Programme: (2) Air and Climate Change

Controlling Officer: Permanent Secretary for the Environment / Director of Environmental Protection (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

It is stated in the Budget that an additional funding of \$200 million will be injected into the Green Tech Fund (GTF), with a view to further promoting decarbonisation and enhancing environmental protection in Hong Kong. The funding injected will primarily be used to subsidise projects in priority areas such as net-zero electricity generation, energy saving and green buildings, green transport and waste reduction, which will in turn help support innovation and create job opportunities for the innovation and technology industry. Some 40 additional projects can be funded with the new injection. In this connection, please advise this Committee of the following:

- (1) Since the introduction of the GTF in 2020, how many applications have been received so far? Of which, what are the numbers of applications approved and rejected respectively? What are the main reasons for rejecting the applications?
- (2) Besides the GTF, had funding support been provided to green research and development (R&D) projects in the past financial years? If yes, please set out the details, including the relevant R&D projects, R&D outcomes and the funding amounts.

Asked by: Hon CHAN Siu-hung (LegCo internal reference no.: 1)

Reply:

The Government set up the new Green Tech Fund (GTF) in 2020 to provide better and more focused funding support for research and development (R&D) projects, so as to encourage R&D institutes to develop and utilise decarbonisation and green technologies with high application and commercialisation potential that cater for the specific needs of Hong Kong's environment and market, thereby expediting low-carbon transformation and enhancing environmental protection in Hong Kong. The first round of applications for the GTF was open in December 2020 with 191 applications received. Upon deliberation, the Assessment Committee approved a total of 14 projects, including 11 applications from 4 local higher education institutions and 3 applications from 3 private enterprises, involving a total grant of around \$70 million. The R&D projects approved cover a wide range of topics, including the promotion and development of new energy and renewable energy, promotion of transport electrification, turning of waste into resources, low-carbon waste



management technologies, and smart waste management, etc. The major reasons for not funding the 177 projects include the applicants' failure to submit sufficient information to demonstrate how the project objectives could be achieved and how the technical challenges in the R&D processes could be tackled; the lack of significant contribution by the proposed R&D projects to decarbonisation and environmental protection when compared with conventional or existing technologies; or limited application potential of the project outcomes in Hong Kong, etc.

Besides the GTF, the Environment and Conservation Fund (ECF) and the Innovation and Technology Fund (ITF) also provide funding support to research projects related to environmental protection. In the past 3 years, the funding scheme "Environmental Research, Technology Demonstration and Conference Projects" under the ECF approved a total of 54 projects related to green technology, involving a funding amount of about \$37 million. The approved projects, the names of the organisations and the amount of funding approved are set out at Annex 1. Administered by the Innovation and Technology Commission, the ITF has approved a total of 49 R&D projects in the area of environmental technology, involving a funding amount of about \$156 million. The approved projects and the amount of funding approved are set out at Annex 2.

Environment and Conservation Fund  
Approved Projects Related to Green Technology  
2019-20 Financial Year

	<b>Applicant</b>	<b>Project Title</b>	<b>Amount of Funding Approved</b>
1.	City University of Hong Kong	Study and development of an advanced solid desiccant cooling system for Hong Kong buildings	\$486,000.00
2.	Hong Kong Baptist University	Valorisation of non-recyclable paper wastes by hydrothermal liquefaction	\$488,000.00
3.	Technological and Higher Education Institute of Hong Kong, Vocational Training Council	Simultaneous valorisation of plastic waste and discarded electric vehicle batteries via co-hydrothermal treatment for energy storage applications	\$1,205,466.00
4.	The Hong Kong Polytechnic University	Reduction of microplastics contaminants by enhanced entrapment with environmental bacterial biofilms	\$489,000.00
5.	The Hong Kong Polytechnic University	Smart and sustainable drainage network in Hong Kong using artificial intelligence and machine learning techniques	\$1,943,000.00
6.	The University of Hong Kong	Single-ion conducting network polymers as the viable electrolytes for lithium metal battery – A key technology toward high capacity battery	\$499,500.00
7.	The University of Hong Kong	Feasibility study of using 2nd generation biodiesel (HVO) as motor fuel in Hong Kong	\$1,145,000.00
8.	The University of Hong Kong	Reducing construction waste in Hong Kong through adopting innovative modular integrated construction (MiC)	\$482,500.00
9.	The University of Hong Kong	Big data-based “AI inspector” for gauging inert contents at the off-site construction waste sorting facilities in Hong Kong	\$485,000.00
		<b>Subtotal (I) :</b>	<b>\$7,223,466.00</b>

2020-21 Financial Year

	<b>Applicant</b>	<b>Project Title</b>	<b>Amount of Funding Approved</b>
1.	City University of Hong Kong	Investigation of nanobubble flotation to remove micro/nano plastic from Sewage Treatment Works (STWs) in Hong Kong	\$500,000.00
2.	City University of Hong Kong	Application of machine learning techniques in predicting primary and secondary organic aerosols	\$497,180.00
3.	City University of Hong Kong	Surface engineering of large-size 3D porous micro-nanostructures for synergistic solar-driven seawater evaporation and hydrogen production	\$499,640.00
4.	City University of Hong Kong	Electrocatalytic degradation of refractory organics in active landfill leachate to enhance the sequencing batch reactor (SBR) denitrification process	\$497,000.00
5.	Hong Kong Baptist University	Comparative study on subcritical hydrothermal treatment as pre- and post- treatment of anaerobic digestion – Opportunities for the improvement of food waste treatment technology in Hong Kong	\$497,200.00
6.	Hong Kong Baptist University	Liquefaction of organic construction waste	\$478,100.00
7.	Technological and Higher Education Institute of Hong Kong, Vocational Training Council	Wood waste derived anti-bacterial and biodegradable nano-fibers for filtration applications	\$499,555.60
8.	The Education University of Hong Kong	Identification, characterisation, and process modification for enhancing removal efficiency of microplastics in sewage treatment works with different designs in Hong Kong	\$1,000,000.00
9.	The Hong Kong Polytechnic University	Development of efficient and robust photocatalysts for hydrogen production technology for reducing fossil fuel consumption and emissions	\$500,000.00

	<b>Applicant</b>	<b>Project Title</b>	<b>Amount of Funding Approved</b>
10.	The Hong Kong Polytechnic University	Biomass-waste-derived carbon as advanced anodes for Na- and K- ion batteries	\$496,400.00
11.	The Hong Kong Polytechnic University	Hydrothermal carbonisation for recycling organic waste into biochar for soil improvement in Hong Kong	\$1,216,383.00
12.	The Hong Kong Polytechnic University	Transparent wood for energy saving applications: coated wood glass – From fabrication to technology demonstration	\$850,000.00
13.	The Hong Kong Polytechnic University	Detection of methane fugitive emissions from landfills using drone based hyperspectral remote sensing	\$499,200.00
14.	The Hong Kong University of Science and Technology	Solar-harvesting transparent smart window for building applications	\$482,592.00
15.	The Hong Kong University of Science and Technology	Engineering cyanobacteria from Hong Kong waters to produce biofuel – A key technology towards renewable energy and carbon reduction	\$900,000.00
16.	Hong Kong Metropolitan University	Monitoring of the impact of the upgrade project of the Yuen Long Wastewater Treatment Works on the antibiotics concentration and the microbial community in the Shan Pui River and the Mai Po Nature Reserve (Phase 1 – Baseline establishment)	\$500,000.00
17.	The University of Hong Kong	Advanced machine vision guided aquatic surface vehicles for refuse monitoring and capturing in watercourses	\$496,000.00
18.	The University of Hong Kong	Design of sustainable drainage systems (SuDS) in hilly areas of Hong Kong	\$496,000.00
19.	The University of Hong Kong	Feasibility study of using dredged marine deposits stabilised with coal fly ash as fill materials for geotechnical projects in Hong Kong	\$490,000.00
		<b>Subtotal (II) :</b>	<b>\$11,395,250.60</b>

2021-22 Financial Year

	<b>Applicant</b>	<b>Project Title</b>	<b>Amount of Funding Approved</b>
1.	City University of Hong Kong	Development of a new nanocrystalline alloy WPT4 high energy-efficiency wireless charger for electric vehicle	\$478,000.00
2.	City University of Hong Kong	Development of stable and cost-effective photocatalysts for the removal of nitrogen oxides in air	\$500,000.00
3.	City University of Hong Kong	Identification and removal of small microplastics from wastewater treatment plants in Hong Kong	\$498,000.00
4.	City University of Hong Kong	Development of intelligent energy storage station using second-life electric vehicle batteries	\$715,520.00
5.	City University of Hong Kong	Graphene oxide moisture condenser for high efficiency dehumidifiers	\$500,000.00
6.	Hong Kong Baptist University	Investigation on removal of the microplastics in food waste digestate for safer organic fertilizers	\$499,200.00
7.	The Hong Kong Polytechnic University	Engineering a microbial biosensor for monitoring microplastics pollution	\$499,000.00
8.	The Hong Kong Polytechnic University	Development of novel photocatalytic technology for solar-driven simultaneous hydrogen production and pollutant degradation from wastewater	\$500,000.00
9.	The Hong Kong Polytechnic University	Green conversion of microalgal biomass into high value products	\$498,000.00
10.	The Hong Kong Polytechnic University	Optimal design of high performance textile-based solar steam generator by tunable capillary evaporation	\$485,300.00
11.	The Hong Kong Polytechnic University	Innovative bifacial solar photovoltaic - From theoretical model to its practical application in Hong Kong	\$494,000.00
12.	The Hong Kong Polytechnic University	Study of high purity oxygen aeration for biological polishing of chemical enhanced primary treated sewage effluent and cellulase production from sludge	\$1,999,800.00

	<b>Applicant</b>	<b>Project Title</b>	<b>Amount of Funding Approved</b>
13.	The Hong Kong Polytechnic University	Recycling yard waste into new-generation biochar adsorbents for CO <sub>2</sub> and VOCs removal	\$1,179,557.00
14.	The Hong Kong Polytechnic University	A multi-source remote sensing based technique for monitoring oil spills	\$1,920,520.00
15.	The Hong Kong Polytechnic University	Intelligent monitoring and diagnosis platform for second-life battery energy storage systems based on artificial intelligence and internet of things technologies	\$499,000.00
16.	The Hong Kong Polytechnic University	Developing high power electric vehicle (EV) chargers using waste graphite and separators derived from end-of-life EV batteries	\$464,400.00
17.	The Hong Kong Polytechnic University	Climate-resilient planning and design for coastal stormwater drainage systems	\$490,600.00
18.	The Hong Kong Polytechnic University	GPS-assisted smart robot with self-exploration ability for litter pick-up and sorting on curved hillsides	\$499,400.00
19.	The Hong Kong University of Science and Technology	The development of a high-density roadside sensor network to apportion vehicle fleet emission contribution to roadside NO <sub>2</sub> pollutants	\$960,000.00
20.	The University of Hong Kong	Structure-conformal and mechanically robust batteries for miniaturized mobile machineries	\$497,520.00
21.	The University of Hong Kong	Building demolition waste management through smart BIM in Hong Kong	\$478,130.00
22.	The University of Hong Kong	Towards sustainable and negative carbon footprint deep cement mixing for reclamation in Hong Kong	\$500,000.00
23.	The University of Hong Kong	Photocatalytic degradation of microplastics	\$1,306,072.00
24.	The University of Hong Kong	Photoluminescent carbon dots converted from biomass for VOCs sensing	\$498,000.00

	<b>Applicant</b>	<b>Project Title</b>	<b>Amount of Funding Approved</b>
25.	The University of Hong Kong	Clean photocatalytic re-solutioning of precious elements from eWaste and re-use as single-atom catalysts	\$1,281,360.00
26.	The University of Hong Kong	Feasibility study of using microbially stabilized dredged marine clay as fill materials for sustainable land reclamation in Hong Kong	\$500,000.00
		<b>Subtotal (III):</b>	<b>\$18,741,379.00</b>
		<b>Grand Total (I) + (II) + (III):</b>	<b>\$37,360,095.60</b>

Innovation and Technology Fund  
Approved Projects In the Area of Environmental Technology  
2019-20 Financial Year

	<b>Project Title</b>	<b>Amount of Funding Approved</b>
1.	Development of Innovative Containerised System for in-situ Recycling of Food Waste	\$2,121,175.00
2.	Low-dimensional Metal Oxide-Assembled Monolithic Catalysts for VOC Remediation	\$1,380,000.00
3.	Innovative Fire-Spalling-Proof Ultra-High Performance Concrete (UHPC)	\$622,345.50
4.	Investigation and Demonstration to Convert Camellia Oleifera Shell Biomass into Functional Bio-composites	\$947,140.00
5.	Development of a ClO <sub>2</sub> -UV/Chlorine Advanced Treatment Process for Provision of Clean Water	\$1,399,262.00
6.	Treatment of Fat, Oil and Grease (FOG) Contaminated Water and Their Recovery for Recycle	\$1,398,400.00
7.	AiPollut Watcher – to Watch Street Air Pollution with Intelligent Eyes	\$1,399,492.50
8.	High Sensitive and Selectivity Plasmonic Systems for Ultrafine Particulate Matter (PM) 0.1 and 0.3 Detection	\$1,383,330.40
9.	Smart Noise Logger-based Leak Diagnosis System	\$2,313,225.00
10.	Developing a catalytic pyrolysis process to produce diesel from mixed waste plastic with modified magnetic nano-clay/ash catalysts	\$1,498,050.00
11.	Development of Biodegradable Nanocellulose Materials	\$2,799,905.00
12.	Development of Biodegradable Single-use Delivery Container, Disposable Hotel Personal-care & Reusable In-flight Tableware Using Plant Stem Based Materials	\$1,752,700.00
13.	NAMI Hot Water Soluble Biodegradable Materials	\$5,709,750.00
14.	NAMI Biodegradable Composite	\$5,424,550.00
15.	Development of Monocoque Low Platform Electric Minibus with Assisted Braking System	\$6,302,914.00
16.	Tree Monitoring Sensor	\$840,663.00
	<b>Sub-total (I):</b>	<b>\$37,292,902.40</b>



2020-21 Financial Year

	<b>Project Title</b>	<b>Amount of Funding Approved</b>
1.	Development Of Environmental Friendly Multifunctional Protective Coating Based On Bionic Functional Interface	\$899,300.00
2.	Impact assessment of mosquito-repellent softener on conventional wastewater treatment processes and development of advanced technologies for pyrethroids removal	\$449,075.00
3.	Intelligent Sensing System for Boiler Energy Saving and Pollutant Emission Monitoring	\$2,132,100.00
4.	Precision Manufacturing and Bioactivation of Artificial Reefs to Facilitate Coral Restoration	\$1,952,815.00
5.	NAMI Biodegradable Non-woven Replacement Material	\$6,149,050.00
6.	NAMI Nanocomposite Hydrophobic Oleophobic Biodegradable Packaging	\$4,956,431.00
7.	High Resolution Numerical Weather Simulation: A commercial service platform for commercial/public sectors, with a sample application on pollution control	\$4,041,500.00
8.	The creation of safe battery with high energy and power density	\$8,183,881.50
9.	Development of rechargeable NiMH battery with wide operating temperature beyond current rechargeable battery technology by using advanced cathode, anode materials	\$6,309,066.50
10.	High energy pulse fiber laser for free space sensing applications	\$1,384,425.00
11.	R&D of a 28-seat Low-Entry and Lightweight Full Electric Minibus with AI-Enhanced ADAS and Geofencing Systems	\$8,890,000.00
12.	Development of High Efficient Hydrogen Fuel Cell Hybrid System for Electric Forklifts	\$7,132,000.00
13.	High-efficient Recycling of End-of-life Electric Vehicle Batteries for Energy Storage Material Regeneration	\$1,731,527.10
14.	Development of Renewable Energy Supported Highly Efficient Wastewater Treatment System	\$1,092,500.00
15.	Artificial Intelligence (AI) based Hydro-ecological and Environmental Monitoring System for Water Security Warning	\$2,446,234.00
16.	Ultraparpermeable Nanofiltration Membranes and Modules	\$1,399,550.00

	<b>Project Title</b>	<b>Amount of Funding Approved</b>
17.	Modeling and Analysis of Water Pipe Failure: Investigate Causes, Find Solutions, and Develop Potential Strategies, Policies, and Regulations	\$7,599,200.00
18.	Removal of Indigo Blue Color in Denim Plant Wastewater by Macroalgae – A Preliminary Study	\$2,904,011.00
19.	NAMI Biodegradable Materials for Disposable Sanitary Pad Product and its Package	\$1,959,010.00
	<b>Sub-total (II):</b>	<b>\$71,611,676.10</b>

2021-22 Financial Year

	<b>Project Title</b>	<b>Amount of Funding Approved</b>
1.	Development of environmental-friendly air-source high-temperature heat pump unit for domestic hot water supply	\$940,970.00
2.	Enhancement of Nano Confined Catalytic Oxidation Technologies and Development of High Efficiency VOC Treatment Equipment for Healthcare Industry	\$3,263,925.00
3.	Volatile Organic Compounds Gold Standard Laboratory	\$14,999,999.93
4.	Pilot Study of the Innovative CeFSCM-CfSBBR System for Advanced Wastewater Treatment	\$8,009,980.00
5.	Development of nano-photocatalytic marine antifouling/anticorrosion coatings	\$1,879,298.99
6.	Anti-corrosion, Anti-biofilm and Anti-biofouling Coating Materials for Fresh and Salt Water Pipes	\$1,196,000.00
7.	Multispectral Acoustic Sensor for On-Site Plastic Sorting	\$2,799,100.00
8.	Development of Hybrid Electric Drum Driveline System for Concrete Mixer Trucks	\$2,665,668.00
9.	NAMI Seaweed-based Biodegradable Foam	\$2,799,100.00
10.	Development of Biodegradable Materials for Surgical Mask Based on NAMI's Biodegradable Technologies	\$1,469,200.00
11.	Development of Nano Bubble External System for Laundry Service	\$1,711,000.00
12.	Development of Natural-Based Smoothing & pH Regulating Agents on Natural-Based Non-Woven Top Sheet for Pad Products	\$1,469,200.00

	<b>Project Title</b>	<b>Amount of Funding Approved</b>
13.	Development of Biodegradable Polyethylene Terephthalate Glycol (PETG) Smart Card Product by Using NAMI's Anaerobic Biodegradation Accelerator	\$1,711,000.00
14.	Energy Optimization with Demand Management and Thermostat Control	\$2,247,050.00
	<b>Sub-total (III):</b>	<b>\$47,161,491.92</b>
	<b>Grand Total (I) + (II) + (III):</b>	<b>\$156,066,070.42</b>

- End -

**CONTROLLING OFFICER'S REPLY**

**ENB014**

**(Question Serial No. 0727)**

Head: (44) Environmental Protection Department

Subhead (No. & title): ( - ) Not specified

Programme: (1) Waste

Controlling Officer: Permanent Secretary for the Environment / Director of Environmental Protection (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

With regard to local waste treatment, please inform this Committee of the following:

1. Is there any progress on the tendering of the North East New Territories Landfill Extension project? If yes, what are the details?
2. Are there any measures to expedite the works progress of the proposed Shek Kwu Chau incinerator?
3. Is there any plan for a second phase of the Shek Kwu Chau incinerator project or the construction of new incinerators? If yes, when will such plan be put forward?
4. Has the Administration considered plans for the 18 districts to build their own small-scale incinerators?

Asked by: Hon CHAN Yuet-ming (LegCo internal reference no.: 7)

Reply:

1. The open tendering exercise for the North East New Territories Landfill Extension project was completed in 2021 and the contract was awarded in January 2022.
- 2.&3. To achieve the goal of moving away from the reliance on landfills for municipal solid waste (MSW) disposal by 2035, the Government is not only committed to promoting waste reduction at source and various means of recycling, but also expediting the development of sufficient waste-to-energy (WtE) facilities with a view to transforming unavoidable and non-recyclable MSW into resources comprehensively.

I-PARK1 (Integrated Waste Management Facilities Phase 1) is being built on an artificial island of about 16 hectares in the open sea off Shek Kwu Chau and the reclamation works for the artificial island have been completed. The contractor has arranged for the prefabrication of some of the concrete structures as well as electrical and mechanical equipment of the project respectively in the Mainland and Europe, and the delivery of them to the artificial island subsequently for assembly in order to complete the project as soon as possible. Besides, we have worked with the contractor proactively on various measures, including improving the supply of

materials, making good use of works schedule and rearranging construction sequences to expedite the works progress. I-PARK1 is expected to be commissioned in 2025. Given the limited area of the artificial island, it is only sufficient for building an integrated waste management facility (IWMF) with a treatment capacity of 3 000 tonnes per day as originally planned, and there is no room for expansion.

When planning for the development of I-PARK1, the Government carried out an in-depth study on the middle ash lagoon at Tsang Tsui in Tuen Mun as one of the potential sites under consideration. The conditions of the Tsang Tsui site are relatively mature for developing the WtE facilities. This will be conducive to the expeditious commencement and completion of the works for the second IWMF (I-PARK2). We endeavour to commission the I-PARK2 in the early 2030s. We will commence in the first half of this year a fresh round of both the Environmental Impact Assessment and the technical studies for the Tsang Tsui site, with a treatment capacity preliminarily set at around 4 000 tonnes of MSW per day.

Apart from I-PARK1 and I-PARK2, the Government also plans to build more WtE facilities, so as to achieve the goal of “Zero Landfill”. As such, we will commence a territory-wide site search study in parallel to identify other potential sites suitable for developing similar WtE facilities, followed by the associated planning studies, with due consideration of various relevant factors including geographical location, available land, environmental impacts, waste transportation arrangements and the distribution of waste management infrastructure.

4. Regarding the suggestion of introducing small-scale incineration facilities in all districts to treat MSW, the Environmental Protection Department had explored the feasibility of such suggestion. The cost-effectiveness of treating MSW with small-scale incineration facilities is much lower than that with large-scale facilities of similar types. In fact, the land required for small-scale incineration facilities is not small. According to the experience in Tokyo of Japan, the smallest incineration plant that treats 200 tonnes of waste each day requires about 1 hectare of land, while incineration facilities with daily treatment capacities from 300 to 600 tonnes of waste require about 3 to 5 hectares of land. From the perspective of effective use of land resources, the provision of numerous small-scale incineration facilities is not suitable for Hong Kong.

In considering the scale of waste treatment facilities, the Government has analysed various relevant factors in detail, including Hong Kong’s geographical setting, waste disposal quantity, the uniqueness of the local situation, etc. When planning the development of local IWMFs, the Government has also made reference to the treatment capacities of similar facilities in other densely populated cities, such as Singapore which features similar demographic and geographical characteristics as Hong Kong, as well as our overall strategy on waste transfer and treatment (i.e. sending most of our local waste for compaction and containerisation at refuse transfer stations before transferring to downstream treatment facilities by marine transport). The final recommendation was phased development of large-scale IWMFs in an appropriate scale at suitable locations.

- End -

**CONTROLLING OFFICER'S REPLY**

**ENB015**

**(Question Serial No. 0728)**

Head: (44) Environmental Protection Department

Subhead (No. & title): (-) Not specified

Programme: (1) Waste

Controlling Officer: Permanent Secretary for the Environment / Director of Environmental Protection (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

The North East New Territories Landfill in Ta Kwu Ling has been causing serious environmental problems, including air and water pollution, infestation of mosquitoes and flies, etc. In this connection, please inform this Committee of the following:

- 1 Are there any measures to improve and solve the malodour problem caused by the landfill, which affects both Hong Kong and Shenzhen?
- 2 Are there any measures to improve and solve the problem of fly and mosquito infestation in the area?
- 3 As refuse collection vehicles travelling at high speed in the area had caused accidents and environmental pollution on numerous occasions, are there any measures to improve the problem?
- 4 What additional resources will be required to improve or solve the above problems?

Asked by: Hon CHAN Yuet-ming (LegCo internal reference no.: 8)

Reply:

1. The Environmental Protection Department (EPD) attaches great importance to the concern of residents over the operation of the North East New Territories (NENT) Landfill. The design and operation of the NENT Landfill comply with stringent international standards and various measures have been adopted to minimise its impact on the surrounding environment. The landfilling area is designed and constructed as an enclosed containment incorporating a multilayer composite liner system covering the entire ground surface, and gas and leachate generated from the landfill are collected and properly treated. The landfill contractor is also required to strictly control the size of the operational areas and, upon completion of waste disposal every day, cover up the waste with a layer of clean soil in accordance with the contractual requirements to control odour emission. Although the level of operation required under the original contract has already attained international standards, the EPD actively addresses the concern of residents over the operation of the landfill and odour problem through allocating more resources and imposing additional requirements for the contractor to implement more improvement measures to enhance the level of

operation and mitigate the impacts of the operation of the landfill on residents. These measures include:

- Reducing the original size of the waste tipping area of the landfill significantly from about 5 000 m<sup>2</sup> to about 2 500 m<sup>2</sup>;
- Installing 16 additional deodourisers to reduce odour emission from the landfill;
- Covering the waste tipping area with clean soil and a durable stucco layer (Posi-shell cover) at the end of the daily operation, to ensure environmental hygiene and reduce odour emission;
- Installing covers for the 3 leachate storage lagoons by phases to seal the leachate surface for reducing odour emission;
- Commissioning professional bodies to carry out regular independent monitoring at the landfill, the Liantang area and the neighbouring villages, including measuring the concentration of hydrogen sulphide and odour level;
- Carrying out real-time monitoring of hydrogen sulphide and setting up a dedicated website to release the monitoring data to the public;
- Shortening the time for receiving waste at the NENT Landfill by 1 hour, i.e. stop receiving waste after 6 p.m. every day.

2. The EPD has been working closely with the Food and Environmental Hygiene Department (FEHD) in monitoring the fly and mosquito infestation situation in the villages of Ta Kwu Ling and taking the appropriate actions where necessary, including the procurement and installation of 21 solar mosquito killers in the villages, conducting joint site inspections with the FEHD to identify hygiene blackspots in the district, and arranging pest control contractors to conduct mosquito and fly control work (such as spraying insecticide at the hygiene blackspots) in the villages of Ta Kwu Ling at least once a week, so as to step up insect control in the villages and maintain environmental hygiene of the district. Furthermore, the EPD also inspects the surrounding areas of the landfill on a regular basis and has requested the landfill contractor to enhance insect control inside the landfill. The landfill contractor has also installed fly monitoring devices at 9 different locations in the district (namely Ping Yeung Village, Heung Yuen Wai, Chuk Yuen Village, Wo Keng Shan Village, Nga Yiu Ha Village, Ping Che Village, Tai Po Tin Village/Sheung Shan Kai Wat, Chow Tin Tsuen and Lin Ma Hang Village) for fly monitoring and submits the reports to the EPD on a monthly basis.
3. With regard to the driving safety and environmental nuisance problems caused by refuse collection vehicles in the Ta Kwu Ling district, the EPD has installed closed-circuit television cameras near the roundabout of Lung Shan Tunnel in November 2021 to monitor the situation. So far, 3 cases of suspected illegal leachate dripping have been detected, and the related surveillance footage and documents have been referred to the FEHD for follow-up enforcement actions. The FEHD also indicated that it has been conducting joint enforcement operations with the Hong Kong Police Force on a regular basis. The EPD and the FEHD will continue to closely monitor and follow up on the matters concerned.
4. For the improvement measures implemented at the NENT Landfill by the EPD as mentioned above, the cost of the additional equipment required, the installation cost incurred as well as the operating cost in the first year amounted to about \$150 million. The subsequent annual operating cost is about \$86 million, which is equivalent to an

increase of about 30% in the annual operating cost of the NENT Landfill. We do not have a separate breakdown of the expenditure involved in improving or tackling the problem of fly and mosquito infestation, as well as the driving safety and environmental nuisance problems caused by refuse collection vehicles in the district.

- End -



**CONTROLLING OFFICER'S REPLY**

**ENB016**

**(Question Serial No. 0729)**

Head: (44) Environmental Protection Department

Subhead (No. & title): (-) Not specified

Programme: (6) Nature Conservation

Controlling Officer: Permanent Secretary for the Environment / Director of Environmental Protection (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

The development of wetland conservation parks is proposed in the Northern Metropolis Development Strategy and a preliminary feasibility study will be conducted. According to the Government's initiative, the conservation area covers Lok Ma Chau and Futian Port. This will turn Lok Ma Chau Loop, which is the intended focus of development, into an isolated island and cause serious impact on the overall development of the Northern Metropolis. What are the expected size of the conservation and development areas respectively in the feasibility study on the wetland conservation parks of the Environment Bureau? Will the overall development be considered as the key principle where priority will be given to ensuring the connectivity and effectiveness of the development corridor, and leaving the needs for conservation to be catered for at a later stage?

Asked by: Hon CHAN Yuet-ming (LegCo internal reference no.: 9)

Reply:

The Chief Executive announced in October 2021 the Northern Metropolis Development Strategy (the Development Strategy) which put forward the development of the northern part of Hong Kong into a metropolis with an area of about 30 000 hectares. Regarding the overall development proposed in the Development Strategy, the planning principle of "Urban-Rural Integration and Co-existence of Development and Conservation" is adopted under the Development Strategy. After consulting the Development Bureau (DEVB), the Development Strategy proposes the development of about 600 hectares of housing and economic land, with a view to implementing a proactive conservation policy to expand environmental capacity while creating development capacity through identifying more land that are suitable for development.

Regarding the Lok Ma Chau Loop, according to the information provided by the DEVB, the Government has planned various connections to the surrounding area, including the construction of a western connection road to the west of the Hong Kong-Shenzhen Innovation and Technology Park (HSITP), a direct road link to the MTR Lok Ma Chau Station, as well as an eastern connection road to the Kwu Tung North New Development

Area. The Government will also examine how to enhance the connectivity with the HSITP in the investigation study for San Tin/Lok Ma Chau Development Node commenced in October 2021.

In the meantime, the Development Strategy also proposes to adopt a proactive conservation policy and resume private fish ponds and wetlands with conservation value in Deep Bay and, together with the adjoining Government land, to establish a system of Wetland Conservation Parks with a total area of about 2 000 hectares to create environmental capacity, so that Hong Kong can strike a proper balance between conservation and development and achieve “Co-existence of Development and Conservation”. The Agriculture, Fisheries and Conservation Department will commence a strategic feasibility study on the exact locations, areas and management model for the Wetland Conservation Parks within this year and consult stakeholders in due course.

- End -

**CONTROLLING OFFICER'S REPLY**

**ENB017**

**(Question Serial No. 0544)**

Head: (44) Environmental Protection Department

Subhead (No. & title): (-) Not specified

Programme: (4) Water

Controlling Officer: Permanent Secretary for the Environment / Director of Environmental Protection (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

In recent years, the Environmental Protection Department has been constructing and modifying dry weather flow interceptors (DWFIs), aiming to improve the quality and mitigate the odour problem of coastal waters of Victoria Harbour. In this connection, please advise this Committee of the following:

1. The location, construction and completion time, as well as expenditure involved of the DWFI projects that were completed and commissioned in the past 3 years.
2. Please list out the location, construction and completion schedule, as well as estimated expenditure of the DWFI projects that are planned for construction or modification, or under construction.
3. Will more sites be identified for commencing the next round of DWFI works? If yes, what are the details and where are the initially identified sites? If no, what are the reasons?
4. How many sewer misconnection cases had been followed up by the Government in the past 3 years? How many statutory repair or removal orders were issued? How many cases were rectified? Among such cases, how many were rectified by government contractors? Please set out the numbers by the 18 districts.
5. How many complaints on odour of seawater were received by the Government in the past 3 years? Please set out the numbers by the 18 districts. How were the cases being followed up by the Administration?

Asked by: Hon CHENG Wing-shun, Vincent (LegCo internal reference no.: 10)

Reply:

1. Details of the dry weather flow interceptor (DWFI) projects that were completed and commissioned in the past 3 years are as below:

	<b>Project</b>	<b>Location of project</b>	<b>Construction time</b>	<b>Completion time</b>	<b>Expenditure</b>
1	Upgrading of West Kowloon and Tsuen Wan Sewerage – Phase 1	Construction of new and modification of existing DWFIs in Tsuen Wan, Cheung Sha Wan, Sham Shui Po, Tai Kok Tsui, Mong Kok, Yau Ma Tei and Jordan	September 2017	Completed in stages from 2019 to January 2022	About \$145 million

2. Details of the DWFI projects under construction or planning are as below:

(i) DWFI projects under construction

	<b>Project</b>	<b>Location of project</b>	<b>Construction time</b>	<b>Expected completion time</b>	<b>Estimated expenditure</b>
1	Construction of Dry Weather Flow Interceptor at Cherry Street box culvert	Waterfront of the New Yau Ma Tei Typhoon Shelter	December 2017	End of 2022	About \$664.6 million
2	West Kowloon and Tsuen Wan Village Sewerage – Phase 1	Kwong Pan Tin Tsuen, San Tsuen Northeast, Fu Yung Shan, Wo Yi Hop Upper Village, Hon Man Squatter Area, Sam Tung Uk, Sheung Yat Chuen and Shek Lei Hang	July 2020	End of 2023	About \$100 million
3	Revitalisation of Tsui Ping River	King Yip Street, Wai Fat Road and Hip Wo Street	July 2020	End of 2024	About \$48 million
4	Sewerage to Lei Yue Mun Village	Lei Yue Mun Praya Road	November 2018	Early 2023	About \$11 million

## (ii) DWFI projects under planning

	Location of project	Expected construction time	Expected completion time	Estimated expenditure
1	Hung Hom Waterfront near Kin Wan Street	Construction to be commenced in phases starting from 2023	2028	As the project is still in the planning stage, the estimated expenditure will be assessed upon completion of the preliminary design
2	Causeway Bay Typhoon Shelter			
3	Tsuen Wan Bay			
4	Shau Kei Wan Typhoon Shelter			
5	Wan Chai East harbour-front area near Hung Hing Road			

3. The Government is now exploring installation of pollutant interception facilities and identifying feasible locations for other coastal areas of Victoria Harbour, such as Cheung Sha Wan, To Kwa Wan and Tai Kok Tsui. As the preparatory work involves complex land, planning and environmental issues, preliminary sites are yet to be identified.

4. Statistics on cases handled by the Buildings Department related to misconnection of sewers from private buildings to stormwater drainage system (sewer misconnection) in 2019, 2020 and 2021 are tabulated by districts as follows:

District	Number of cases of sewer misconnection requiring follow-up actions			Number of repair/removal orders issued <sup>(1)</sup>			Number of cases rectified <sup>(2)</sup>			Number of cases rectified by government contractors <sup>(2)</sup>		
	2019	2020	2021	2019	2020	2021	2019	2020	2021	2019	2020	2021
Central & Western	5	4	9	2	4	9	4	6	6	0	0	0
Wan Chai	3	2	3	3	0	8	2	8	1	0	0	0
Eastern	8	3	10	4	5	7	2	5	7	0	0	0
Southern	0	0	0	0	0	0	0	2	0	0	0	0
Kowloon City	6	6	7	3	36	7	2	47	13	0	0	0
Yau Tsim Mong	39	33	36	22	24	46	9	12	28	0	0	1
Kwun Tong	0	2	2	1	0	0	0	1	3	0	1	0
Wong Tai Sin	3	1	2	0	0	0	4	3	0	0	0	0
Sham Shui Po	1	5	0	2	2	7	5	2	1	0	0	0
Islands	0	0	0	0	0	0	0	0	0	0	0	0
Sai Kung	0	0	0	0	0	0	0	0	0	0	0	0
Tsuen Wan	3	2	5	6	5	12	0	2	8	0	0	1
Kwai Tsing	0	0	2	0	0	2	0	0	0	0	0	0
Sha Tin	0	1	0	0	1	0	0	0	2	0	0	0
Tuen Mun	0	0	2	0	1	2	0	0	1	0	0	0
North	0	0	0	0	0	0	0	0	0	0	0	0
Tai Po	1	2	2	0	1	1	0	3	1	0	0	0
Yuen Long	4	3	3	1	0	0	1	1	0	0	0	0
<b>Total</b>	<b>73</b>	<b>64</b>	<b>83</b>	<b>44</b>	<b>79</b>	<b>101</b>	<b>29</b>	<b>92</b>	<b>71</b>	<b>0</b>	<b>1</b>	<b>2</b>

Note (1): The figures do not necessarily correspond to the numbers of cases requiring follow-up in the same period.

Note (2): The figures do not necessarily correspond to the numbers of orders issued in the same period.

5. The Government received a total of 81 odour complaints about seawater in the past 3 years. Their distribution by District Council district is as follows:

<b>District</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Central & Western	2	2	2
Eastern	1	2	2
Southern	0	0	1
Wan Chai	0	0	1
Kowloon City	1	2	2
Kwun Tong	1	0	2
Sham Shui Po	0	0	0
Yau Tsim Mong	6	4	6
Wong Tai Sin	0	0	0
Islands	0	0	2
Kwai Tsing	1	0	0
North	0	0	0
Sai Kung	2	0	1
Sha Tin	0	0	0
Tai Po	0	0	0
Tsuen Wan	7	16	15
Tuen Mun	0	0	0
Yuen Long	0	0	0

Apart from the continual planning of pollutant interception projects, the Government has been gradually implementing a series of measures, including launching a territory-wide replacement and rehabilitation programme for underground sewers to minimise the risks of environmental pollution arising from the damage of ageing sewers; expediting the rectification of sewer misconnections; carrying out inspection, maintenance and desilting for public sewers and stormwater drainage systems on a regular basis; and applying “odour-control hydrogel” at stormwater outfall locations as well as the coastal areas nearby to mitigate odour problems. “Odour-control hydrogel” is a new technology collaboratively developed by the Drainage Services Department and the Hong Kong University of Science and Technology, and is proven through on-site tests to be effective in reducing odour in drainage systems.

- End -

**CONTROLLING OFFICER'S REPLY**

**ENB018**

**(Question Serial No. 0373)**

Head: (44) Environmental Protection Department

Subhead (No. & title): (-) Not specified

Programme: (2) Air and Climate Change

Controlling Officer: Permanent Secretary for the Environment / Director of Environmental Protection (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

Regarding promotion of environmental protection, it is mentioned in paragraph 158 of the Budget that the Financial Secretary (FS) will inject an additional funding of \$200 million into the Green Tech Fund (GTF), with a view to further promoting decarbonisation and enhancing environmental protection in Hong Kong. The funding injected will primarily be used to subsidise projects in priority areas such as net-zero electricity generation, energy saving and green buildings, green transport and waste reduction, which will in turn help support innovation and create job opportunities for the innovation and technology (I&T) industry. Some 40 additional projects can be funded with the new injection. In this connection, please advise:

1. of the number of applications received in the first round; the respective numbers of projects approved, not approved and withdrawn; the I&T areas, the funding and job opportunities for the I&T industry involved in the approved projects; and among these projects, those that have been implemented or will be implemented, as well as the implementation timetables;
2. of the current GTF balance; the criteria adopted by the FS for determining the amount of additional funding to be injected; and the basis on which the number of additional projects that can be funded with the new injection is estimated to be about 40;
3. of the estimated number of job opportunities that can be created for the I&T industry with the new injection; and the major I&T areas to be involved;
4. whether the Administration has reviewed the effectiveness in promoting decarbonisation and enhancing environmental protection since the launch of GTF, including whether the objectives set by the Administration in launching the relevant measure can be achieved; if yes, of the review results and the follow-up measures.

Asked by: Hon CHIU Duncan (LegCo internal reference no.: 10)

Reply:

The Government set up the new Green Tech Fund (GTF) in 2020 to provide better and more focused funding support for research and development (R&D) projects, so as to encourage R&D institutes to develop and utilise decarbonisation and green technologies with high

application and commercialisation potential that cater for the specific needs of Hong Kong's environment and market, thereby expediting low-carbon transformation and enhancing environmental protection in Hong Kong. The first round of applications for the GTF was open in December 2020 with 191 applications received. Upon deliberation, the Assessment Committee approved a total of 14 projects, including 11 applications from 4 local higher education institutions and 3 applications from 3 private enterprises, involving a total grant of around \$70 million. It is estimated that nearly 100 job opportunities can be created for the innovation and technology (I&T) industry. The R&D projects approved cover a wide range of topics, including the promotion and development of new energy and renewable energy, promotion of transport electrification, turning of waste into resources, low-carbon waste management technologies, and smart waste management, etc. The list of recipient organisations, the themes of the approved projects and the amount of funding are set out at Annex. The major reasons for not funding the 177 projects include the applicants' failure to submit sufficient information to demonstrate how the project objectives could be achieved and how the technical challenges in the R&D processes could be tackled; the lack of significant contribution by the proposed R&D projects to decarbonisation and environmental protection when compared with conventional or existing technologies; or limited application potential of the project outcomes in Hong Kong, etc.

The GTF has a balance of around \$130 million. The Budget for the 2022-23 financial year proposed an injection of an additional funding of \$200 million into the GTF. Based on the experience in the first round of GTF applications in which 14 projects involving a total grant of around \$70 million were approved, it is expected that the injection of \$200 million can subsidise some 40 additional projects. The funding injected will primarily be used to subsidise projects in priority areas such as net-zero electricity generation, energy saving and green buildings, green transport and waste reduction. It is believed that a few hundred job opportunities can be created for the I&T industry.

Funding approval for the projects in the first round of GTF applications had just been given between October and December last year. The projects will commence progressively and the outcomes of these research projects are not yet available.



## Projects approved under the Green Tech Fund

	<b>Project title</b>	<b>Applicant</b>	<b>Amount of funding</b>
<b>New energy and renewable energy</b>			
1	Development of High Performance and Long Life Hydrogen Fuel Cell Stacks	The Hong Kong University of Science and Technology	\$8,991,500
2	Development of Printable Perovskite Solar Cells for Transformative Clean Energy and Sustainable Society	City University of Hong Kong	\$5,031,934
3	A safe, efficient and facile approach for hydrogen storage and generation: catalytic hydrolysis of solid-state hydrogen storage materials	The Hong Kong Polytechnic University	\$3,305,100
4	Green Hydrogen Production from Active Flow Membraneless Electrolyzers	The Hong Kong University of Science and Technology	\$3,198,150
5	Turning Water into the Source of Solar Hydrogen via Photocatalyst Panel	City University of Hong Kong	\$2,876,449
<b>Transport electrification</b>			
6	Smart Power Conditioners Using Second Life Electric Vehicle (EV) Batteries	City University of Hong Kong	\$6,687,710
7	Agile and Dynamic Control Technologies to Enhance System Stability and Power Quality Considering Renewables and Electrical Vehicle Impacts	CAFEA Smart City Limited	\$2,504,200
<b>Low-carbon waste management</b>			
8	Reducing Biological Landfill Leachate Treatment Footprint via Rapid Electrochemical-UV Technologies	The Hong Kong University of Science and Technology	\$6,674,600
9	Coupling AnMBR and PNA for Compact - and Energy-Saving Landfill Leachate Treatment	The University of Hong Kong	\$4,381,040
<b>Promotion of circular economy and turning waste into resources</b>			
10	Biochar-enhanced Construction Materials for Sustainable Waste Management and Decarbonisation	The Hong Kong Polytechnic University	\$8,784,200
11	Recycling of waste lithium-ion batteries as highly active fuel cell catalysts	The Hong Kong Polytechnic University	\$2,783,920

	<b>Project title</b>	<b>Applicant</b>	<b>Amount of funding</b>
<b>Smart waste management</b>			
12	Green Intelligent Garbage Bag Assessment System	United Microelectronics Centre (Hong Kong) Limited	\$2,514,580
<b>Smart and real-time air quality monitoring</b>			
13	Temperature and Humidity Impact Free Gas Sensor and Monitor System Development for Real-time High Performance Air Quality Monitoring	Sundial Technology Development Limited	\$5,701,200
14	Portable and low-cost sensors for the ambient air monitoring of BTEX and other volatile organic compounds	City University of Hong Kong	\$5,686,750

- End -

**CONTROLLING OFFICER'S REPLY**

**ENB019**

**(Question Serial No. 0227)**

Head: (44) Environmental Protection Department

Subhead (No. & title): (-) Not specified

Programme: (2) Air and Climate Change

Controlling Officer: Permanent Secretary for the Environment / Director of Environmental Protection (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

The Government launched the \$2 billion EV-charging at Home Subsidy Scheme (EHSS) in October 2020 to incentivise the installation of electric vehicles charging-enabling infrastructure (EVCEI) in car parks of the existing private residential buildings. The Government has also indicated that an additional sum of \$1.5 billion will be injected to extend the EHSS. Please provide information on the following:

1. Over the past year, how many private housing estates have been subsidised by the above EHSS to conduct the relevant installation works? What are the specific locations? How many parking spaces are involved?
2. How many parking spaces or alteration works in private housing estates can be funded with an additional injection of \$1.5 billion? In order to install EVCEI at about 140 000 parking spaces in 700 existing private residential buildings (representing about half of the eligible parking spaces in Hong Kong), how many years will it take to achieve this target based on the previous application response?

Asked by: Hon CHOW Man-kong (LegCo internal reference no.: 4)

Reply:

1. Up to the end of February 2022, the Environmental Protection Department has received over 560 applications (involving about 115 000 parking spaces) under the EV-charging at Home Subsidy Scheme (EHSS) from the 18 districts across the territory, among which 250 applications (involving about 59 000 parking spaces) were approved. The list of approved applications is uploaded on the EHSS website: <https://www.evhomecharging.gov.hk/downloads/List%20of%20approved%20applications%2028%20Feb.pdf>.

The tendering exercises for the first batch of over 220 applications have been progressively initiated to procure the services of a consultant to design and subsequently supervise the installation works of the EV charging-enabling infrastructure (EVCEI). Some of the applicants can proceed with procuring the services of a contractor starting from the first quarter of this year and their installation

works of the EVCEI are expected to be gradually completed starting from the end of this year.

2. The EHSS has received overwhelming response since its launch. Upon completion of the EHSS in 2027-28 with the additional injection of \$1.5 billion, we expect that the whole scheme would support the installation of EVCEI for a total of about 140 000 parking spaces in some 700 car parks of existing private residential buildings.

- End -

**ENB020**

**CONTROLLING OFFICER'S REPLY**

**(Question Serial No. 0405)**

Head: (44) Environmental Protection Department

Subhead (No. & title): (-) Not specified

Programme: (1) Waste

Controlling Officer: Permanent Secretary for the Environment / Director of Environmental Protection (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

In recent years, the Government has successively launched the pilot scheme on waste plastics collection and recycling and the Reverse Vending Machine Pilot Scheme, which are designed to enhance the recovery quantity and encourage public participation in waste separation and recycling. In this connection, please inform this Committee of the increase in recovery rates upon implementation of the two pilot schemes. What are the actual whereabouts of the recyclables recovered? Besides, what is the expected timetable for the expansion of the schemes? What are the manpower and expenditures involved?

As for municipal solid waste charging and the Plastic Shopping Bag Charging Scheme, does the Administration have an implementation timetable? What are the expenditure required and the expected results? How will the charges collected through these measures be used? Will provisions be made to implement other waste reduction measures or educational initiatives?

Asked by: Hon CHU Kwok-keung (LegCo internal reference no.: 10)

Reply:

To complement public education, drive behavioural changes and improve the recovery rate of waste plastics, the Environmental Protection Department (EPD) has commenced progressively since January 2020, a two-year pilot scheme on waste plastics collection and recycling in Eastern District, Kwun Tong and Sha Tin to collect all types of waste plastics from non-commercial and non-industrial sources for further processing into plastic raw materials or recycled plastic products, so as to ensure that waste plastics collected are properly handled. As of January 2022, about 470 housing estates, buildings and other premises in the 3 districts have registered under this scheme, covering about half of the population of the 3 districts. The total quantity recovered was about 3 015 tonnes.

The pilot scheme on waste plastics collection and recycling will be gradually extended to 9 districts starting from the first quarter of 2022. The 6 newly covered districts are Tai Po, Sai Kung, Central and Western District, Sham Shui Po, Tsuen Wan and Tuen Mun

respectively. This scheme is managed by 6 staff of the Environmental Protection Officer grade and 5 staff of the Environmental Protection Inspector grade. Together with the service contracts of the pilot scheme, the estimated total expenditure involved in 2022-23 is about \$40 million.

Regarding the Reverse Vending Machine (RVM) Pilot Scheme, in order to pave the way for the future implementation of the Producer Responsibility Scheme on Plastic Beverage Containers, the EPD launched a one-year pilot scheme in 2021 to test out the application of RVMs in Hong Kong. A total of 60 RVMs have been set up in phases at locations with suitable foot traffic with an instant rebate provided via e-payment platforms to encourage the public to return used plastic beverage containers for recycling. Positive responses have been received so far since the launch of the RVM Pilot Scheme. As at the end of January 2022, over 17 million plastic beverage containers, or about 425 tonnes of waste plastics have been collected in total and delivered to local recyclers for recycling. Meanwhile, the contract for Stage 2 of the RVM Pilot Scheme was also awarded on 24 December 2021. It is expected that Stage 2 will be launched in phases in the second quarter of 2022 with the number of RVMs to be increased to 120 progressively.

The estimated expenditure for the RVM Pilot Scheme for the 2022-23 financial year is about \$32 million, mainly for engaging a contractor to carry out the scheme. As the running of the RVM Pilot Scheme is an integral part of the work of the Waste Management Policy Division under the EPD, there is no separate breakdown of the manpower involved.

The Waste Disposal (Charging for Municipal Solid Waste) (Amendment) Bill 2018 was passed by the Legislative Council (LegCo) in August 2021. A preparatory period of 18 months as a basic arrangement has commenced to allow the Government, various stakeholders and members of the public to prepare for the implementation of municipal solid waste (MSW) charging. We will pay close attention to various aspects of the community, report progress of our preparatory work to the LegCo Panel on Environmental Affairs at opportune juncture and consult the Panel on the actual implementation date of the legislation.

The total estimated expenditure for the preparatory work of MSW charging for the 2022-23 financial year is about \$106 million, mainly for salary and the relevant expenditure involved in establishing a manufacturing, inventory and distribution system for the designated garbage bags/labels. To complement the implementation of MSW charging, the Government has allocated additional recurrent resources to strengthen waste reduction and recycling work since the 2019-20 financial year. The provision will be further increased to no less than \$800 million to \$1 billion each year from the financial year in which MSW charging is implemented. The amount of this annual provision would be commensurate with the estimated gross revenue to be generated from MSW charging in the initial period so as to achieve the effect of “dedicated-fund-for-dedicated-use”.

The first phase of the Plastic Shopping Bag (PSB) Charging Scheme was implemented on 7 July 2009 and was extended to the entire retail sector with effect from 1 April 2015. Under the PSB Charging Scheme, save for exemptions, retailers are required to charge at least 50 cents for each PSB provided to customers. The PSB charge is retained by retailers. As estimated from the landfill disposal survey, the total number of PSB disposed of in 2015 (i.e. within the first year of full implementation of the Scheme) reduced by 25%.

However, we note that there was a rebound of PSB disposal rate in the following years. The Government invited the Council for Sustainable Development (SDC) to conduct the public engagement on control of single-use plastics from September to December 2021 with a view to collecting opinions from the public on the types of single-use plastic products (including PSB) to be tackled, the priority, the approach for managing them (such as voluntary measures or regulation) and the timeline. We will map out the way forward having considered the SDC's recommendations (including any enhancement of the PSB Charging Scheme) to be submitted to the Government. The relevant work is an integral part of the EPD's work and the expenditure is absorbed by its existing resources.

- End -

**CONTROLLING OFFICER'S REPLY**

**ENB021**

**(Question Serial No. 0745)**

Head: (44) Environmental Protection Department

Subhead (No. & title): (-) Not specified

Programme: (1) Waste

Controlling Officer: Permanent Secretary for the Environment / Director of Environmental Protection (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

Please provide information on the following:

1. Please set out the payments for various types of contract and the staff establishment for each item under Subhead 297 "Fees for operation of waste management facilities".
2. According to government information, the Sludge Treatment Facility (T-PARK) was designed with a treatment capacity of up to 2 000 tonnes of sludge per day, meaning up to 700 000 tonnes annually. However, the actual quantities treated were only around 400 000 tonnes over the past 2 years. Please explain the reasons for the difference and whether there are plans to increase the treatment capacity to a higher level. While operating in the mode of "BOT", what methods have been used to monitor the operational situation, the targets for treatment capacity and the cost-effectiveness of T-PARK?
3. The expected treatment capacity of the Waste Electrical and Electronic Equipment Treatment and Recycling Facility (WEEE-PARK) was 30 000 tonnes of waste regulated electrical equipment (REE) per year when being constructed. However, the actual amount treated was only about 24 000 tonnes and the estimated annual amount to be treated in 2022 is 24 000 tonnes only. Please explain the reasons for not reaching the maximum treatment capacity. What are the percentages of the materials recovered from dismantled waste REE being sent for recycling and disposal at landfills respectively?
4. Besides, since the implementation of the Producer Responsibility Scheme on Waste Electrical and Electronic Equipment (WPRS), what were the numbers of waste REE recycled through the statutory free removal service (by type of waste REE) and the total quantity of waste REE involved, the percentages in the amount treated in WEEE-PARK and the expenditure involved? Among these waste REE, how many of them could be removed on the same day? Has the Administration kept the statistics on the percentages of different scenarios involving "no removal", "using the statutory free removal service" and "removal by additional payment to retailers or transportation companies" after members of the public purchased new REE in the market?
5. In what way did the Administration monitor the fly-tipping situation since the implementation of WPRS, and what were the staff establishment and ranks concerned? What were the number of inspections conducted, as well as the numbers of investigations



and prosecutions instituted each year? For waste electrical appliances without labels found at refuse collection points, what responsibility do the cleansing contractors have at present?

Asked by: Hon KAN Wai-mun, Carmen (LegCo internal reference no.: 7)

Reply:

1. Under Subhead 297 “Fees for operation of waste management facilities” for 2022-23, the contract payments by major waste management facilities are tabulated below:

	<b>2022-23 Estimate (\$ million)</b>
South East New Territories Landfill	272
West New Territories Landfill	355
North East New Territories Landfill	441
Refuse Transfer Stations	730
Aftercare of restored landfills	136
Low-level Radioactive Waste Storage Facility	11
Chemical Waste Treatment Centre	272
Animal Waste Composting Plant	25
T·PARK	306
WEEE·PARK	212
O·PARK1	105
Y·PARK	31
Food waste pre-treatment facilities	14
Pilot Biochar Production Plant in EcoPark	2
<b>Total</b>	<b>2,912</b>

The management of the operation of different waste management facilities is mainly undertaken by staff in relevant divisions and sections of the Environmental Protection Department (EPD). We do not have a separate breakdown of the manpower resources required for the management tasks of individual facilities.

2. The design capacity of T·PARK has taken into account that the amount of sludge received after its commissioning will gradually increase with population growth. Back then, the projected average amount of sludge for the past 2 years was about 450 000 tonnes, which was more or less the same as the actual figure. It is expected that the amount of sludge will increase close to the maximum of 2 000 tonnes per day by 2030.

T·PARK operates under a Design-Build-Operate contract. Nonetheless, staff of the EPD are deployed on-site to monitor the daily operation of the facilities to ensure the service of the contractor complies with the contractual requirements.

3. The design capacity of the Waste Electrical and Electronic Equipment Treatment and Recycling Facility (WEEE·PARK), which was developed to underpin the Producer Responsibility Scheme on Waste Electrical and Electronic Equipment (WPRS), is around 30 000 tonnes of waste regulated electrical equipment (REE) per year. The objective of the development of WEEE·PARK is to ensure that Hong Kong has

adequate capacity to properly process the waste REE generated locally, particularly those with lower recycling value or higher processing cost, such as refrigerators and washing machines. The Government also provides a last resort service for the statutory removal service provided by the REE sellers in support of the implementation of the WPRS. Besides, apart from WEEE·PARK, there are a total of 17 facilities with valid waste disposal licences for e-waste in Hong Kong, which can process a total of about 106 000 tonnes of waste REE a year.

In 2021, WEEE·PARK processed a total of 23 971 tonnes of waste REE, among which over 80% of the materials have been sent for recycling.

4. From the implementation of the WPRS on 1 August 2018 up to the end of December 2021, WEEE·PARK processed a total of about 78 439 tonnes of waste REE. The actual operating cost of WEEE·PARK was around \$220 million in the 2020-21 financial year. The EPD does not have a separate breakdown of the waste REE collected and processed by different removal services.

In 2021, the WEEE·PARK operator handled a total of about 138 200 statutory free removal service requests. Regarding the statutory free removal service, the operator has now been able to collect waste REE from customers in 3 working days after receiving service requests from sellers, at the time slot requested by customers, in over 99.9% of the cases. As regards the free collection service outside the statutory removal service (i.e. no new electrical equipment is purchased), the operator is able to collect the waste REE in about 1 week or a shorter time after receiving the telephone appointments in over 99.9% of the cases. The EPD does not have a separate breakdown of the cases involving “no removal” and “removal by additional payment to retailers or transportation companies” after members of the public purchased new electrical appliances.

5. The EPD has been vigorously combating fly-tipping activities, especially those involving disposal of construction waste and commercial and industrial waste. Apart from conducting irregular surprise inspections, the EPD has also installed surveillance camera systems at about 180 locations of frequent illegal waste disposal across the territory to facilitate law enforcement. Since the full implementation of the WPRS at the end of 2018, the EPD has conducted over 360 inspections against fly-tipping of e-waste. After investigation, the EPD successfully instituted prosecutions against 11 cases involved in fly-tipping of e-waste (including summonses and Fixed Penalty Notices). In addition, there are already established arrangements between the EPD and the Food and Environmental Hygiene Department (FEHD). If abandoned REE is found on street, staff of the FEHD (including cleansing contractors) will temporarily place such e-waste at designated refuse collection points, and then notify the WEEE·PARK operator to collect and deliver it to WEEE·PARK for proper treatment and recycling.

Law enforcement is part of the integrated enforcement work of the EPD. We do not have a separate breakdown of the establishment or ranks involved.

- End -

**CONTROLLING OFFICER'S REPLY**

**ENB022**

**(Question Serial No. 0481)**

Head: (44) Environmental Protection Department

Subhead (No. & title): (-) Not specified

Programme: (1) Waste

Controlling Officer: Permanent Secretary for the Environment / Director of Environmental Protection (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

In respect of Matters Requiring Special Attention in 2022-23, please inform this Committee of the following:

1. As the pilot scheme on reverse vending machines (RVMs) will be expanded in the coming year, how many RVMs will be added? Please provide a breakdown by district. When will this pilot scheme be formalised?
2. With regard to mapping out the way forward and initiating the legislative process for regulation of disposable plastic tableware in phases, please set out the details of each phase.
3. As for mapping out suitable enhancement of the Plastic Shopping Bag Charging Scheme, what is the work progress so far?
4. As for the development of a modern pulping facility in EcoPark, Tuen Mun to diversify outlets for local waste paper, is there any progress on the tendering exercise of the pulping facility? If yes, what are the details? If no, how will the development of waste paper recycling pulping plant be fostered in Hong Kong?
5. The pilot scheme on collection of waste plastic will gradually be expanded to 9 districts. Which 9 districts are these? When will this pilot scheme be formalised?
6. As for continuing to take forward the development of O-PARKs and food waste/sewage sludge anaerobic co-digestion facilities, please set out the treatment capacity of the facilities in the next 3 years and the plan to increase treatment capacity. If there is no such data or plan, will this issue be looked into?

Asked by: Hon KWOK Wai-keung (LegCo internal reference no.: 2)

Reply:

1. To pave the way for the future implementation of the Producer Responsibility Scheme on Plastic Beverage Containers (PPRS), the contract for Stage 2 of the Reverse Vending Machine (RVM) Pilot Scheme was awarded on 24 December 2021. It is expected that Stage 2 will be launched in phases in the second quarter of 2022 with the number of RVMs to be increased from the current 60 to 120 progressively. The contractor engaged by the Government will timely update the relevant information on the thematic website ([www.hkrvm.com.hk/en/rvmmmap](http://www.hkrvm.com.hk/en/rvmmmap)) for public's reference. We

are mapping out the suitable regulatory framework and way forward for the PPRS and considering the necessary legislative amendments.

2. The Scheme on Regulation of Disposable Plastic Tableware has proposed the control of disposable expanded polystyrene (EPS) tableware in the first place, including banning the local sale of disposable EPS tableware and the provision of disposable EPS tableware by catering premises to customers, while non-EPS disposable plastic tableware should be regulated progressively in 2 phases. The first phase consists of banning the provision of all types of disposable plastic tableware by catering premises to customers for dine-in services as well as the provision of straws, stirrers, forks, knives, spoons and plates by catering premises to customers for takeaway services. In the second phase, takeaway services can be regulated in the same manner as dine-in services. Taking account of the views received, we are carrying out the preparatory work for the necessary legislative amendments. Given the need of members of the public for an adaptation period, the first phase of the Regulation control is expected to be implemented in around 2025.
3. The Council for Sustainable Development (SDC) conducted the public engagement on control of single-use plastics from September to December 2021 with a view to collecting opinions from the public on the types of single-use plastic products (including plastic shopping bags) to be tackled, the priority, the approach for managing them (such as voluntary measures or regulation) and the timeline. We will map out the way forward having considered the SDC's recommendations (including any enhancement of the Plastic Shopping Bag Charging Scheme) to be submitted to the Government.
4. Since 2020-21, the Government has earmarked not less than \$300 million a year for supporting local waste paper recycling. To provide more diversified outlets for local waste paper, the Environmental Protection Department (EPD) has taken forward the development of a modern pulping facility in EcoPark, Tuen Mun. The open tender exercise for the lease of the lots has been completed. The facility is expected to commence operation by 2024 to 2025 processing not less than 300 000 tonnes of local waste paper annually.
5. Starting from March 2022, the pilot scheme on waste plastics collection and recycling will be gradually extended to 9 districts, including Eastern District, Central and Western District, Kwun Tong, Sha Tin, Tai Po, Sai Kung, Sham Shui Po, Tsuen Wan and Tuen Mun. The service contracts awarded in late January 2022 will last for 33 months (including 3 months of preparatory period). We will review the effectiveness and economic benefits of the pilot scheme, and further optimise the service to cover the entire territory progressively.
6. The treatment capacity of O-PARKs and the food waste/sewage sludge anaerobic co-digestion facilities in the next 3 years are set out in the table below. In the longer term, the EPD and the Drainage Services Department will look into further expanding the food waste treatment capacity of the Tai Po Sewage Treatment Works and extending the anaerobic co-digestion technology to other suitable sewage treatment works (STW).

<b>Year</b>	<b>Treatment capacity (tonnes)</b>	<b>Relevant facilities</b>
2022-23	250	O·PARK1 and the Food Waste/Sewage Sludge Anaerobic Co-digestion Trial Scheme of the Tai Po STW
2023-24	600	O·PARK1 and the Food Waste/Sewage Sludge Anaerobic Co-digestion Trial Scheme of the Tai Po STW plus O·PARK2 and the Food Waste/Sewage Sludge Anaerobic Co-digestion Trial Scheme of the Sha Tin STW
2024-25	600	Same as above

- End -

**ENB023**

**CONTROLLING OFFICER'S REPLY**

**(Question Serial No. 0485)**

Head: (44) Environmental Protection Department

Subhead (No. & title): (-) Not specified

Programme: (2) Air and Climate Change

Controlling Officer: Permanent Secretary for the Environment / Director of Environmental Protection (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

1. More than 550 applications covering over 115 000 parking spaces have been received for the EV-charging at Home Subsidy Scheme. Among them, how many of the parking spaces have already been put into use and how many are still under construction and not yet in service?
2. The New Energy Transport Fund has approved around 230 trials to try out green innovative transport technologies. Please set out the applicants, approved funding and titles of these projects.
3. According to the medium-term decarbonisation target, the Administration aims to reduce Hong Kong's carbon emissions by 50% before 2035 as compared to the 2005 level. Only around 13 years are left before reaching 2035. Has the Administration set a standard for the decarbonisation target of each year? What plans or measures will be implemented for achieving the decarbonisation target of each year? Will resources be allocated for cooperating with higher education institutions to research on new energy such as hydrogen energy with a view to achieving the decarbonisation target?

Asked by: Hon KWOK Wai-keung (LegCo internal reference no.: 3)

Reply:

1. The Government launched the \$2 billion EV-charging at Home Subsidy Scheme (EHSS) in October 2020 to promote installation of electric vehicles charging-enabling infrastructure (EVCEI) in car parks of existing private residential buildings. Up to the end of February 2022, the Environmental Protection Department (EPD) has received over 560 applications (involving about 115 000 parking spaces) from the 18 districts across the territory, among which 250 applications (involving about 59 000 parking spaces) were approved. The tendering exercises for the first batch of over 220 applications have been progressively initiated to procure the services of a consultant to design and subsequently supervise the installation works of the EVCEI. Some of the applicants can proceed with procuring the services of a contractor starting from the first quarter of this year and their installation works of the EVCEI are expected to be gradually completed starting from the end of this year. The actual

number of parking spaces to be covered by the EVCEI installed in the car parks will be available after completion of the installation works.

2. The Government has put in place a New Energy Transport Fund (NET Fund) since March 2011 to encourage the transport sector to try out and use green innovative transport technologies. As at the end of February 2022, the NET Fund has approved a total of 256 trials, with a total subsidy of about \$209 million. Details of the approved trials have been uploaded to EPD's website:  
[https://www.epd.gov.hk/epd/sites/default/files/epd/tc\\_chi/environmentinhk/air/prob\\_solutions/files/Approved\\_Trials\\_Eng\\_Chi\\_0.pdf](https://www.epd.gov.hk/epd/sites/default/files/epd/tc_chi/environmentinhk/air/prob_solutions/files/Approved_Trials_Eng_Chi_0.pdf)

To avoid hindering approved applicants from receiving competitive tenders, we will not disclose the amounts of subsidy for various types of products on trial, nor the amount of subsidy for individual approved trial.

3. Combating climate change is an important issue across the globe. President Xi Jinping made it clear that China's medium-to-long term decarbonisation targets were to endeavour to achieve the peak of carbon emissions in 2030 and carbon-neutrality before 2060. The Chief Executive announced in the 2020 and 2021 Policy Address respectively that the Hong Kong Special Administrative Region would strive to achieve carbon neutrality before 2050 and reduce Hong Kong's carbon emissions by 50% before 2035 as compared to the 2005 level, so as to tie in with the national "dual carbon" targets. Setting medium-to-long-term decarbonisation targets is in line with the mainstream international practice.

In October 2021, the Environment Bureau announced Hong Kong's Climate Action Plan 2050 which outlined the 4 major decarbonisation strategies, namely "net-zero electricity generation", "energy saving and green buildings", "green transport" and "waste reduction", to lead Hong Kong towards the goal of carbon neutrality. Innovative technologies play a pivotal role in achieving carbon neutrality. The Green Tech Fund (GTF) established with a \$200 million Government allocation has approved a total of 14 projects from local higher education institutions and private enterprises, involving a total grant of around \$70 million. The research and development projects approved cover a wide range of topics, including the promotion and development of new energy and renewable energy, promotion of transport electrification, turning of waste into resources, low-carbon waste management technologies, and smart waste management, etc. In view of the overwhelming response, it was proposed in the 2022-23 Budget that an additional funding of \$200 million would be injected into the GTF, with a view to further promoting decarbonisation and enhancing environmental protection in Hong Kong, which would in turn create job opportunities for the innovation and technology industry.

- End -

**CONTROLLING OFFICER'S REPLY**

**(Question Serial No. 0493)**

Head: (44) Environmental Protection Department

Subhead (No. & title): (700) General non-recurrent

Programme: (-) Not specified

Controlling Officer: Permanent Secretary for the Environment / Director of Environmental Protection (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

1. Regarding the feasibility study for the establishment of the manufacturing, inventory and distribution system for designated garbage bags and designated labels under the municipal solid waste charging, the revised estimate for last year was \$536,000. What are the latest progress and results of the study in this year? What specific proposal(s) has/have been made?
2. The revised estimate for the trial of electric buses by franchised bus companies last year was \$2.985 million. What are the specific details of the trial? How many electric buses have been tested and how many kilometres have been travelled? How many drivers have been trained?
3. The revised estimate for the study on the control of disposable plastic tableware last year was \$840,000. What specific details have been proposed in the study? Is there any legislative proposal being included?
4. The revised estimate for the Recycling Fund last year was \$47.173 million. Please list out in details the expenditure for different items.
5. The revised estimate for the pilot scheme on reverse vending machines (RVMs) last year was \$1.476 million. Please provide a detailed breakdown of the expenditure items, including the number of RVMs being set up. Please list out the total number of beverage containers recycled under this scheme by district.

Asked by: Hon KWOK Wai-keung (LegCo internal reference no.: 4)

Reply:

1. When implementing municipal solid waste charging, the Environmental Protection Department (EPD) has to ensure a stable and sufficient supply of the designated garbage bags (the designated bags) and designated labels in the market for the public to purchase. Hence, we need to establish a comprehensive “manufacturing, inventory and distribution system” (the system) and a sales network for the supply of the designated bags and designated labels. With regard to the feasibility study of the system and the sales network, we conducted market surveys in 2021-22 with the relevant trades such as retailing, plastic bag manufacturing and logistics services



respectively to collect their opinions and the updated market information regarding the system and the sales network. The trades supported the Government's proposal in general and provided concrete suggestions on the operational arrangements. We are currently drafting the tender documents and the retail agreements with reference to the views and information collected.

The system will be managed by various contractors, including several manufacturers of the designated bags, 1 manufacturer of the designated labels and 1 logistics service provider for coordinating the inventory and distribution. All the contracts will be awarded through open tendering. The sales network of the designated bags and designated labels covers several thousand sales outlets including supermarkets, convenient stores, pharmacies, post offices and online platforms, etc. At the same time, we will set up vending machines at some of the public transport interchanges and ferry piers that connect rural or remote areas for the convenience of those residing in remote areas.

2. The Government has subsidised franchised bus companies (FBCs) in full to purchase 36 single-deck electric buses (e-buses) and their ancillary charging facilities for trial on a number of routes, with a view to assessing their operational performance under local circumstances. Among these e-buses, 33 have commenced their two-year trials. In addition, to further assess whether the mode of daytime charging can cope with the high operation frequency of bus service in Hong Kong, the Government has been working with FBCs to install new charging facilities at suitable bus termini and depots for single-deck e-buses to conduct top-up charging during their daytime operation. The relevant estimated expenditure in 2021-22 is mainly for installing charging facilities in support of the trial. While the EPD will continue to closely monitor the latest progress of the trial scheme, we do not have the consolidated statistics on the total mileage of the buses concerned and the number of drivers involved.
3. The EPD had conducted a study on the feasibility, scope and mechanism of regulating disposable plastic tableware. Having taken into account overseas experience and the local situation, the study report suggested introducing legislation in phases to regulate disposable plastic tableware, including expanded polystyrene tableware, straws, stirrers, cutlery (such as forks, knives and spoons), plates, cups, cup lids, food containers (such as bowls and boxes) and food container covers, with exclusions under individual special circumstances.
4. The total estimated expenditure of the Recycling Fund for 2021-22 was \$257,414,000, including the unspent balance of \$210,241,000 for 2020-21 and the revised estimate of \$47,173,000 for 2021-22. The estimated expenditure for different items in 2021-22 are as below:

	<b>Estimated expenditure for different items</b>
Funding projects under the Recycling Fund	\$239,932,000
Project management and technical assessment	\$15,287,000
Education, publicity and promotion	\$2,195,000
<b>Total</b>	<b>\$257,414,000</b>

5. The revised estimate, being part of the expenditure for the Reverse Vending Machine (RVM) Pilot Scheme in 2021-22, is to provide the rebate (\$0.1 per plastic beverage container) under the pilot scheme to encourage the public to return used plastic beverage containers for recycling, involving a total of 60 RVMs. As at end of January 2022, more than 17 million plastic beverage containers have been collected under the pilot scheme. The figures by district are tabulated as below:

<b>District</b>	<b>Number of RVMs</b>	<b>Quantity recovered (Number)</b>
Central & Western	5	820 000
Wan Chai	2	480 000
Eastern	5	1 470 000
Southern	2	150 000
Yau Tsim Mong	3	580 000
Sham Shui Po	4	1 420 000
Kowloon City	2	320 000
Wong Tai Sin	3	1 250 000
Kwun Tong	5	2 230 000
Kwai Tsing	3	930 000
Tsuen Wan	4	1 510 000
Tuen Mun	3	1 090 000
Yuen Long	3	1 310 000
North	3	860 000
Tai Po	3	830 000
Sha Tin	6	1 540 000
Sai Kung	2	490 000
Islands	2	370 000
<b>Total</b>	<b>60</b>	<b>17 650 000</b>

- End -

**CONTROLLING OFFICER'S REPLY****ENB025****(Question Serial No. 0130)**Head: (44) Environmental Protection DepartmentSubhead (No. & title): ( - ) Not specifiedProgramme: (2) Air and Climate ChangeControlling Officer: Permanent Secretary for the Environment / Director of Environmental Protection (Janice TSE)Director of Bureau: Secretary for the EnvironmentQuestion:

An additional \$1.5 billion will be injected into the EV-charging at Home Subsidy Scheme (EHSS). Please advise this Committee of the following:

(i) please set out as per the table below the numbers of existing electric vehicle (EV) charging facilities in the territory and their distribution and percentages in the 18 districts.

District	Number of EV charging facilities	Percentage of EV charging facilities in the total number of parking spaces in the district

(ii) the number of charging facilities completed under the EHSS of the Environment Bureau, the numbers of charging facilities completed and to be completed, as well as the amount of subsidy granted, with a breakdown by the 18 districts.

Asked by: Hon LAI Tung-kwok (LegCo internal reference no.: 2)Reply:

(i) The numbers of public electric vehicle (EV) chargers with a breakdown by the 18 districts as at the end of December 2021 are as follows:

District	Number of EV charging facilities
Central & Western	322
Eastern	209
Southern	68

<b>District</b>	<b>Number of EV charging facilities</b>
Wan Chai	360
Kowloon City	170
Kwun Tong	962
Sham Shui Po	267
Wong Tai Sin	105
Yau Tsim Mong	253
Kwai Tsing	174
Tsuen Wan	241
Sai Kung	201
North	261
Tai Po	58
Sha Tin	536
Yuen Long	202
Tuen Mun	89
Islands	218
<b>Total</b>	<b>4 696</b>

The Environmental Protection Department (EPD) does not keep records on the percentages of EV charging facilities and the total number of parking spaces in the 18 districts.

- (ii) Up to the end of February 2022, the EPD has received over 560 applications (involving about 115 000 parking spaces) under the EV-charging at Home Subsidy Scheme from the 18 districts across the territory, among which 250 applications (involving about 59 000 parking spaces) were approved. The tendering exercises for the first batch of over 220 applications have been progressively initiated to procure the services of a consultant to design and subsequently supervise the installation works of the EV charging-enabling infrastructure (EVCEI). Some of the applicants can proceed with procuring the services of a contractor starting from the first quarter of this year and their installation works of the EVCEI are expected to be gradually completed starting from the end of this year. The actual number of parking spaces to be covered by the EVCEI installed in the car parks and the amount of subsidy to be granted will be available after completion of the installation works.

- End -

**CONTROLLING OFFICER'S REPLY**

**ENB026**

**(Question Serial No. 0663)**

Head: (44) Environmental Protection Department

Subhead (No. & title): (-) Not specified

Programme: (2) Air and Climate Change

Controlling Officer: Permanent Secretary for the Environment / Director of Environmental Protection (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

It is stated in the Budget Speech that an additional sum of \$1.5 billion will be injected into the EV-charging at Home Subsidy Scheme (EHSS) to promote the installation of electric vehicle charging-enabling infrastructure in car parks of the existing private residential buildings, and that some existing petrol or liquefied petroleum gas (LPG) filling stations will be gradually converted into quick charging stations. In this connection, please advise this Committee of the following:

- (a) What is the application situation of the EHSS since its implementation in 2020, including the numbers of applications received and approved, the average subsidy amount granted to each application and the number of additional electric vehicle (EV) chargers installed?
- (b) What are the specific plan, timetable and estimated expenditure for converting petrol or LPG filling stations into quick charging stations?
- (c) What are the numbers and charging speed of the EV chargers provided in government car parks at present (please provide a breakdown by the 18 districts of Hong Kong)?
- (d) Does the Government have any plan to install more public EV chargers in 2022-23? If yes, please list out the actual numbers and the expenditure to be involved with a breakdown by the 18 districts of Hong Kong.
- (e) What were the numbers of vehicles procured by various government departments and the percentages of EVs in them in 2017-18, 2018-19, 2019-20, 2020-21 and 2021-22? What were the average vehicle prices?
- (f) What are the estimated number of vehicles to be procured by various government departments and the percentage of EVs in them in 2022-23?
- (g) Will the Administration formulate a procurement policy to give priority to EVs? If yes, what are the details? If no, what are the reasons?

Asked by: Hon LAM Shun-chiu, Dennis (LegCo internal reference no.: 5)

Reply:

- (a) Up to the end of February 2022, the Environmental Protection Department (EPD) has received over 560 applications (involving about 115 000 parking spaces) under the

EV-charging at Home Subsidy Scheme from the 18 districts across the territory, among which 250 applications (involving about 59 000 parking spaces) were approved. The tendering exercises for the first batch of over 220 applications have been progressively initiated to procure the services of a consultant to design and subsequently supervise the installation works of the electric vehicle charging-enabling infrastructure (EVCEI). Some of the applicants can proceed with procuring the services of a contractor starting from the first quarter of this year and their installation works of the EVCEI are expected to be gradually completed starting from the end of this year. The actual number of parking spaces to be covered by the EVCEI installed in the car parks and the amount of subsidy to be granted will be available after completion of the installation works.

- (b) The Government is currently reviewing a number of petrol filling station (PFS) sites to be re-tendered, which includes studying the feasibility of gradually converting these sites into quick charging stations in the medium and long term. We will also explore the feasibility of developing some larger petrol and liquefied petroleum gas filling station sites under the “single site, multiple use” model for different uses, including mega charging stations for charging various types of electric vehicles (EVs) simultaneously.

The EPD is currently working on the respective planning work arising from this initiative. We obtained approval from the Town Planning Board in December 2021 to include EV charging in the planned uses of PFS sites. At present, we are in the process of revising the Hong Kong Planning Standards and Guidelines and locating suitable PFS sites for conducting trial runs. We expect that tender invitation will be issued next year for the first PFS site to be converted into a quick charging station.

- (c) The numbers and charging speed of public EV chargers provided in government car parks with a breakdown by the 18 districts of Hong Kong as at the end of December 2021 are as follows:

District	No. of chargers			
	Standard	Medium	Quick	Sub-total
Central & Western	49	201	3	253
Eastern	5	85	3	93
Southern	0	9	0	9
Wan Chai	21	195	0	216
Kowloon City	63	24	12	99
Kwun Tong	67	46	11	124
Sham Shui Po	29	47	0	76
Wong Tai Sin	5	41	0	46
Yau Tsim Mong	0	0	0	0
Kwai Tsing	5	97	16	118
Tsuen Wan	7	171	0	178
Sai Kung	0	27	0	27
North	50	44	0	94

District	No. of chargers			Sub-total
	Standard	Medium	Quick	
Tai Po	25	16	0	41
Sha Tin	103	124	0	227
Yuen Long	14	74	3	91
Tuen Mun	3	34	0	37
Islands	11	108	4	123
<b>Total</b>	<b>457</b>	<b>1 343</b>	<b>52</b>	<b>1 852</b>

- (d) The Government allocated \$120 million in 2019-20 for extending the public EV charging networks at government car parks in 3 years, including the installation of over 1 000 additional medium chargers at the car parks managed by the Transport Department, the Government Property Agency and the Leisure and Cultural Services Department which are open to the public, bringing the total number of public chargers to about 1 800. As at February 2022, about 850 public medium chargers have been installed and are open for public use. The remaining some 350 medium chargers are expected to be installed and come into service by mid-2022. Please refer to the Annex for the selected sites and number of these chargers.
- (e) According to the information provided by the Government Logistics Department (GLD), the numbers of vehicles\* procured by various government departments, the percentages of EVs in them and the average vehicle prices in the past 5 years are tabulated below:

Year	Number of vehicles procured	Cars		Average EV price (\$)
		Total	Percentage of EVs	
2017	582	482	1.5%	239,000
2018	542	224	3.1%	235,000
2019	273	96	4.2%	292,000
2020	446	196	6.1%	278,000
2021	582	386	7.3%	279,000

\* Excluding specialised vehicles

- (f) According to the information provided by the GLD, the Government plans to procure about 366 vehicles (excluding specialised vehicles) for various departments in 2022, among which includes 142 cars. 55 of them will be EVs, accounting for about 38.7% of the total number of cars to be procured. The remaining cars will not be switched to EVs for the time being due to their emergency or rescue functions.
- (g) To demonstrate the commitment in pushing forward Hong Kong's transition to EVs, the Government is prepared to switch our vehicle fleet to EVs at a faster pace. The circular on Green Procurement in the Government was updated in July 2021 to set EV as the standard for small and medium private cars to be procured or replaced, unless there are special circumstances such as operational needs that render the use of EVs technically infeasible. For other types of vehicles, EVs and other more environmentally friendly vehicles will be accorded priority for the Government's use.

Senior government officials will also take the lead in switching their cars to EVs when their cars are replaced.



**Car parks with EV chargers planned to be installed by the Government**

<b>Department</b>	<b>District</b>		<b>Location</b>	<b>No. of EV chargers to be installed</b>
Transport Department	Southern	1	Aberdeen Car Park	44
	Central & Western	2	Kennedy Town Car Park	59*
		3	Rumsey Street Car Park	75
	Kwai Tsing	4	Kwai Fong Car Park	94*
	Eastern	5	Shau Kei Wan Car Park	81
	Wong Tai Sin	6	Sheung Fung Street Car Park	47
	Wan Chai	7	Tin Hau Car Park	124*
	Tsuen Wan	8	Tsuen Wan Car Park	132*
Government Property Agency	Eastern	9	North Point Government Offices	14*
	Central & Western	10	Queensway Government Offices	28*
		11	Sha Tin Government Offices	54*
	North	12	North District Government Offices	11*
	Tuen Mun	13	Tuen Mun Government Offices	22*
	Sai Kung	14	Sai Kung Government Offices	7*
	Sham Shui Po	15	Cheung Sha Wan Government Offices	41#
	Kowloon City	16	Trade and Industry Tower	20*
Leisure and Cultural Services Department	Central & Western	17	Sun Yat Sen Memorial Park	12*
		18	Sun Yat Sen Memorial Park Sports Centre	6*
	Eastern	19	Siu Sai Wan Sports Ground	15*
		20	Island East Sports Centre	19#
	Southern	21	Deep Water Bay Beach	3*
		22	Ap Lei Chau Waterfront Promenade	6*
	Wan Chai	23	Wong Nai Chung Gap Children's Playground	3*
	Kwun Tong	24	Kowloon Bay Park	11*
		25	Ping Shek Playground	10*
		26	Shun Lee Tsuen Park	4*
		27	Lei Yue Mun Municipal Services Building	6*
	Sham Shui Po	28	Lai Chi Kok Park	8#
		29	Sham Shui Po Sports Ground	2*
30		Cornwall Street Park	2*	
31		Lung Cheung Road Lookout	4*	
Wong Tai Sin	32	Hammer Hill Road Sports Ground	3*	
	33	Po Kong Village Road Park	3*	

Department	District		Location	No. of EV chargers to be installed
	Yau Tsim Mong	34	Kowloon Park	9
	Islands	35	Tung Chung Municipal Services Building	10*
	Kwai Tsing	36	Tsing Yi Southwest Leisure Building	3*
		37	Tsing Yi Northeast Park	6*
		38	Tsing Yi Sports Ground and Tsing Yi Swimming Pool	3
		39	Kwai Chung Sports Ground	3*
		40	Hing Fong Road Playground	3*
		North	41	Sheung Shui Swimming Pool
	42		North District Sports Ground	8*
	43		Wo Hing Sports Centre	4*
	44		Po Wing Road Sports Centre	3*
	45		Fanling Swimming Pool	5*
	Sai Kung	46	Tseung Kwan O Swimming Pool	4
		47	Tseung Kwan O Sports Ground	2
		48	Tiu Keng Leng Sports Centre	2
	Sha Tin	49	Siu Lek Yuen Road Playground	3*
		50	Sha Tin Sports Ground and Yuen Wo Playground	6*
		51	Sha Tin Jockey Club Swimming Pool and Yuen Wo Road Sports Centre	6
		52	Sha Tin Town Hall	5*
		53	Hong Kong Heritage Museum	11
		54	Ma On Shan Swimming Pool	6*
		55	Ma On Shan Sports Ground	15*
		56	Yuen Chau Kok Complex	10*
	Tai Po	57	Tai Po Sports Ground	3*
		58	Tai Po Complex	5*
		59	Kwong Fuk Park	5*
	Tsuen Wan	60	Shing Mun Valley Swimming Pool	2
		61	Shing Mun Valley Sports Ground	6#
	Tuen Mun	62	Tuen Mun North West Swimming Pool	9
		63	Tuen Mun Swimming Pool	3*
		64	Yau Oi Sports Centre	3
	Yuen Long	65	Yuen Long Swimming Pool	17*
		66	Tin Shui Wai Swimming Pool & Tin Shui Wai Sports Centre	11*
		67	Tin Shui Wai Sports Ground	18*

<b>Department</b>	<b>District</b>		<b>Location</b>	<b>No. of EV chargers to be installed</b>
		68	Tin Yip Road Park	12#
		69	Fung Kam Street Sports Centre	17*

\* All chargers are open for public use.

# Some of the chargers have been installed and are open for public use.

Remark: The number of EV chargers listed in the table is a preliminary estimate and the actual number will be affected by factors such as the power supply available at the venue, the availability of the venue and other restrictions.

- End -

**CONTROLLING OFFICER'S REPLY**

**ENB027**

**(Question Serial No. 0103)**

Head: (44) Environmental Protection Department

Subhead (No. & title): (-) Not specified

Programme: (1) Waste

Controlling Officer: Permanent Secretary for the Environment / Director of Environmental Protection (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

For continuing to implement the pilot scheme on free collection of food waste for public premises and commercial and industrial premises, and gradually expanding the scheme to collect food waste from domestic sources, please advise this Committee of:

1. the expenditure and manpower involved, recycling points and quantities of food waste recovered for the pilot scheme on free collection of food waste for public premises and commercial and industrial premises in the past 3 years;
2. the number of participating housing estates, quantities of food waste recovered, expenditure and manpower involved for the pilot scheme on free collection of food waste in the past 3 years;
3. the details of the gradual expansion of the scheme to collect food waste from domestic sources;
4. the progress of implementing food waste recycling schemes in public housing estates or the details of any scheme launched.

Asked by: Hon LAM Siu-lo, Andrew (LegCo internal reference no.: 9)

Reply:

The main service targets of the Pilot Scheme on Food Waste Collection (the Scheme) are those relatively clustered premises generating larger quantities of food waste with less impurities. Over the past 3 years, a total of about 500 such entities have participated in the Scheme, mainly covering public premises (e.g. shopping centres of public housing estates, cooked food venues and public markets, catering facilities of social service organisations, canteens in tertiary institutions and hospitals, etc.) and private commercial and industrial premises (e.g. food factories, hotels, large shopping malls, aircraft caterers, etc.). The Environmental Protection Department (EPD) has implemented the Scheme on a larger scale since September 2021 and rolled out several two-year service contracts in phases to provide food waste collection service for more public and private organisations participating in the Scheme. At the same time, small amount of domestic food waste (e.g. from some of the housing estates with food waste source separation experience) is being collected on a trial basis to explore the operation mode, specific arrangement and effectiveness of domestic

food waste collection. Currently, a total of 18 housing estates (including public and private housing estates) have joined the Scheme. Due to the influence of the COVID-19 epidemic situation and the need to accord priority to anti-epidemic work, some of the interested housing estates have decided to suspend or delay the food waste collection service for the time being.

Up till now, a total of about 113 000 tonnes of food waste have been collected under the Scheme and delivered to O·PARK1 for recycling and energy recovery. We expect that the quantity of food waste collected can gradually reach 250 tonnes per day by the end of 2022.

The expenditure involved, number of participants and quantities of food waste recovered under the Scheme are tabulated below. The manpower involved is absorbed by the existing establishment of the EPD.

Year	Expenditure involved (\$ million)	Participants [Note 1]		Quantity of food waste recovered (tonnes) [Note 2]
		Public and commercial & industrial premises	Housing estates	
2019-20	25.4	241	0	33 700
2020-21	35.1	315	0	34 200
2021-22	39.9 (Estimated expenditure)	359	18	45 000 [Note 3]

Note 1: Organisations subsidised by the Government and voluntarily participated in the source separation and collection of food waste have been covered, including premises already participating and those pending official commencement of collection service in the respective year.

Note 2: Quantity of food waste recovered refers to the amount of food waste treated by O·PARK1 in the respective year.

Note 3: The amount of food waste treated as at January 2022.

We will review and refine the collection modes at an opportune time so as to provide more cost-effective services in the future. We will also enhance the publicity and promotion of the Scheme together with details of food waste source separation and recycling to the commercial & industrial organisations, property management companies as well as households, with a view to increasing the recovery volume of source-separated food waste generated from commercial, industrial and domestic sectors in an orderly manner.

- End -

**CONTROLLING OFFICER'S REPLY**

**(Question Serial No. 0002)**

Head: (44) Environmental Protection Department

Subhead (No. & title): (-) Not specified

Programme: (1) Waste

Controlling Officer: Permanent Secretary for the Environment / Director of Environmental Protection (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

Regarding the waste treatment and recycling policies, please advise this Committee of the following:

1. As for the Recycling Fund, how many applications have been approved so far since last year? Among them, how many funded projects have commenced or will soon commence? What is the funding amount involved? Has the Government considered enhancing and expanding the funded projects and scope of the Recycling Fund to strengthen the support for the recycling industry? If yes, what are the details? If no, what are the reasons?
2. Will the Government consider providing self-service recycling machines for glass bottles/aluminium cans at shopping malls, supermarkets, libraries and other public facilities and venues? If yes, please provide the details. If no, what are the practical constraints?
3. Have comprehensive studies on the overall cost of the recovery and disposal of different materials been conducted, so as to establish waste recycling mechanisms that serve the community's interests as a whole?
4. Will the pilot scheme on collection of food waste be regularised with its scale expanded to raise the recovery rate of commercial and industrial food waste as well as domestic food waste?
5. Will the Administration increase staffing or introduce measures to strengthen the monitoring of refuse collection points and the nearby recycling facilities so as to reduce the occurrence of illegal dumping? If yes, what are the manpower and expenditure expected to be involved?

Asked by: Hon LO Wai-kwok (LegCo internal reference no.: 2)

Reply:

1. From 2021 to February 2022, the Recycling Fund approved 198 projects in total. Apart from the 2 applications withdrawn by the applicant organisations, all the 196 projects have commenced or will soon commence, involving a total funding of about \$98 million. The Environmental Protection Department (EPD) and the Advisory Committee on Recycling Fund have kept under review the operation of the Fund, and have been actively collecting and responding to the views of the recycling industry through various channels such as meetings with the industry, seminars, briefing

sessions, etc., so as to timely introduce different enhancement measures and expand the scope of subsidy. Various new solicitation themes have been introduced, including supporting start-up enterprises in recycling operations, adopting a smart system to collect and recycle construction and demolition waste generated from small-scale renovation works, and supporting residential buildings to adopt smart recycling bin technologies for collecting and recycling food waste, etc. Moreover, the Government injected an additional funding of \$1 billion to the Recycling Fund in 2021 and extended the application period of the Fund to 2027, with a view to rendering continuous assistance to the recycling industry, particularly the small and medium enterprises, in enhancing their operational capabilities and efficiency to cope with the latest needs of both the local and non-local markets. We have been actively encouraging them to upgrade and transform their operations as well as facilitating them to apply technologies to produce higher value-added products for achieving re-industrialisation, so as to reduce waste disposal at landfills and foster the development of a circular economy.

2. The EPD has been implementing the Producer Responsibility Scheme on glass beverage containers progressively. The glass management contractors engaged by the Government have in place glass container recycling bins across the territory to collect waste glass containers for proper treatment. Members of the public can put the used glass containers in the recycling bins directly for recycling. As for beverage aluminium cans, the recycling market is more stable due to their higher recycling value. Metal recycling can be sustained and driven by the market without government intervention. The collection of waste glass containers and aluminium cans has been operating smoothly in general, and the Government has no intention at this stage to provide reverse vending machines specifically for these two types of waste containers.

Nonetheless, the EPD has launched a Pilot Programme on Smart Recycling Systems (the Pilot Programme) in the fourth quarter of 2020 to test in phases the local application of smart recycling facilities with a view to promoting smart city development as well as to further enhancing the community recycling service and efficiency. In light of the positive outcomes of the initial phase of the Pilot Programme, smart recycling systems will be set up at more locations (including community recycling network facilities, large housing estates and other venues) in the next phase, to significantly increase the number of application points from the existing 4 locations to about 80 to 100 locations for the collection of four types of recyclables, namely waste paper, metals, plastics and glass bottles, as well as to expand the scope of technical trials. It is expected that the next phase of the Pilot Programme will be rolled out progressively in early 2022.

3. The Waste Blueprint for Hong Kong 2035 promulgated by the Government in 2021 outlined the latest waste management strategy and put forward the vision of “Waste Reduction · Resources Circulation · Zero Landfill”. The Waste Blueprint sets the targets on municipal solid waste disposal rate per capita and recovery rates as well as the goal of developing adequate waste-to-energy facilities, with the aim to move away from the reliance on landfills for municipal solid waste disposal by 2035. Among these, municipal solid waste charging is the main driving force behind waste reduction. It will not only drive enterprises and the public to practise waste reduction and

recycling, but also facilitate the sustainable development of related industries and the creation of green job opportunities when the quality and quantity of recyclables collected is enhanced. Meanwhile, the Government has been implementing various producer responsibility schemes progressively which require relevant stakeholders to share the responsibilities for the collection, recycling, treatment and disposal of end-of-life products with a view to avoiding and reducing the environmental impacts caused by such products.

4. The Government implemented the Pilot Scheme on Food Waste Collection on a larger scale in 2021 and rolled out several two-year service contracts in phases to collect food waste from public and private organisations (including commercial and industrial organisations generating larger quantity of food waste as well as housing estates with food waste source separation experience), with the expectation that the quantity of food waste collected can gradually reach 250 tonnes per day (i.e. the maximum daily treatment capacity combined for O-PARK1 and the Food Waste/Sewage Sludge Anaerobic Co-digestion Trial Scheme at the Tai Po Sewage Treatment Works) by the end of 2022. We will review and refine the collection modes at an opportune time so as to provide more cost-effective services in the follow-on contracts in the future. Meanwhile, the Government will also devote more resources to increase the recovery volume of source-separated food waste generated from commercial, industrial and domestic sectors in an orderly manner.
5. The EPD has now placed about 1 800 sets of recycling bins in public places across the territory to facilitate the public to practise clean recycling. Since the quality and quantity of the recyclables collected by recycling bins previously placed near refuse collection points have long been unsatisfactory, we are progressively relocating these recycling bins to more suitable locations, such as scattered residential buildings, rural villages, etc., so as to enhance the overall recycling efficiency. Monitoring the quality and quantity of recyclables is part of the routine work of recycling bin management. There is no separate breakdown of the establishment and expenditure involved.

In addition, to step up the efforts in combating illegal waste disposal, the EPD has installed surveillance camera systems at 180 locations of frequent illegal waste disposal across the territory. The systems operate round-the-clock under all weather conditions, making use of technologies to facilitate law enforcement and enhance the deterrent effect. Meanwhile, apart from the manpower arranged for the daily integrated enforcement duties, the EPD has further deployed manpower to set up 4 additional dedicated enforcement teams comprising a total of 16 staff members to conduct proactive patrols against waste disposal at various districts, handle the relevant complaints, and expedite the collection of evidence. The EPD reviews its enforcement strategies from time to time and flexibly deploys the surveillance camera systems to cover different locations, including installing additional surveillance camera systems and conducting ambush operations at locations of frequent illegal disposal of construction waste in various districts, so as to maximise the enforcement effectiveness. As the relevant law enforcement is part of the integrated enforcement work of the EPD, there is no separate breakdown of the establishment and expenditure involved.

- End -



**CONTROLLING OFFICER'S REPLY**

**(Question Serial No. 0004)**

Head: (44) Environmental Protection Department

Subhead (No. & title): (-) Not specified

Programme: (2) Air and Climate Change

Controlling Officer: Permanent Secretary for the Environment / Director of Environmental Protection (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

In Matters Requiring Special Attention in 2022-23, the Administration stated that it would promote decarbonisation in electricity generation and energy efficiency and conservation in buildings as per the direction set out in the Hong Kong's Climate Action Plan 2050. In this connection, please advise this Committee of the following:

1. the staff establishment and expenditure involved over the past year, and the resources expected to be involved in the coming year to promote carbon audits for products;
2. whether it will consider establishing a carbon audit system for products and a "product carbon footprint" certification scheme that comply with international standards and suit the actual circumstances of local businesses;
3. whether stakeholders, including businesses, consumers, third-party service providers and the Government, are invited to jointly participate in establishing a system that fosters the development of carbon audits. If yes, please provide the details; if no, the reason(s); and
4. whether the setting up of dedicated funding schemes will be considered to provide financial incentives for the trades to promote and implement carbon audits?

Asked by: Hon LO Wai-kwok (LegCo internal reference no.: 4)

Reply:

The promotion of carbon audits, including the work to support bureaux and departments in carrying out carbon audits on major government buildings and infrastructure, is an integral part of the Environmental Protection Department (EPD)'s work on addressing climate change. The manpower and expenditure involved are met by the recurrent expenditure of the EPD, and we do not have a separate breakdown. The promotion work in the coming year will be handled by the existing staff establishment of the EPD.

The carbon footprint of products covers the total amount of greenhouse gas (GHG) emissions caused by the production processes, including raw materials, processing, transportation, packaging and other procedures. At present, the Hong Kong Accreditation Service provides accreditation to local validation and verification bodies for product GHG

statements (i.e. carbon footprint of products) in accordance with the relevant international standards.

Over 60% of carbon emissions in Hong Kong is attributable to generating electricity for our buildings. The Government therefore focuses on exploring opportunities to require buildings to conduct more frequent energy audits and implement identified energy management measures to reduce carbon emissions in Hong Kong.

To encourage the public and private organisations to conduct regular carbon audits, the Government has published the Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings (Commercial, Residential or Institutional Purposes) in Hong Kong. The Hong Kong Exchanges and Clearing Limited (HKEX) issued new carbon disclosure requirements (“comply or explain”) in the Environmental, Social and Governance Reporting Guide for listed companies in December 2019, requiring listed companies to disclose Scope 1 and Scope 2 GHG emissions. According to the data of the HKEX, a majority of the listed companies have already reported on GHG emissions according to the scope classifications, despite the voluntary nature of the disclosure requirement. In fact, by conducting carbon audits and formulating appropriate decarbonisation measures and plans, enterprises are able to reduce not only carbon emissions but also operating costs, thereby enhancing their competitiveness.

To achieve the target of carbon neutrality before 2050, the Environment Bureau will strive to implement the 4 major decarbonisation strategies put forward by the Hong Kong’s Climate Action Plan 2050 and formulate relevant measures (including enhancing consumers’ awareness of carbon footprint, etc.) to encourage all to work together to promote low-carbon transformation in Hong Kong.

- End -

**CONTROLLING OFFICER'S REPLY**

**ENB030**

**(Question Serial No. 0005)**

Head: (44) Environmental Protection Department

Subhead (No. & title): (-) Not specified

Programme: (2) Air and Climate Change

Controlling Officer: Permanent Secretary for the Environment / Director of Environmental Protection (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

Regarding the enhancement of the promotion and application of the Green Tech Fund (GTF), please inform this Committee of the following:

1. What are the numbers of applications received and approved by the GTF, as well as the amount of funding involved so far? Please list out the recipient organisations and the themes of the approved projects.
2. Further to the above question, how many of the recipient organisations are operators from the relevant trades and how many of them are professional research institutes? How would the Administration motivate the trades to get actively involved with a view to enhancing the utilisation efficiency of the GTF?
3. How many research and development (R&D) outcomes have now been promoted to and applied by the trades?
4. What policies are available for enhancing the R&D support of "platform technology" to encourage collaboration between the environmental technology sector and the trades in conducting research to tackle the technical difficulties faced by the trades?
5. Will the application procedures for various funding schemes related to environmental protection be further streamlined to drum up the interest of the trades in participating in the schemes?

Asked by: Hon LO Wai-kwok (LegCo internal reference no.: 5)

Reply:

The Government announced in the 2020-21 Budget that \$200 million would be allocated for setting up the new Green Tech Fund (GTF) to provide better and more focused funding support for the research and development (R&D) and application of decarbonisation and green technologies, so as to expedite low-carbon transformation and enhance environmental protection in Hong Kong. The first round of applications for the GTF was open in December 2020 with over 190 applications received. Upon deliberation, the Assessment Committee approved a total of 14 projects, including 11 applications from 4 local higher education institutions and 3 applications from 3 private enterprises, involving a total grant of around \$70 million. The list of recipient organisations and the themes of the approved

projects are set out at Annex. The second round of applications for the GTF was closed on 25 February this year, and around 100 applications were received.

As funding approval for the above 14 approved projects, with project duration lasting for around 2 to 3 years, was given between October and December last year, the outcomes of these research projects are not yet available.

To encourage the trades to apply for the GTF, apart from granting full funding support to projects conducted by designated local public research institutes and R&D centres, the GTF also provides funding support to projects conducted by private research institutes on a matching basis. Funding for projects conducted by designated local public research institutes and R&D centres is up to \$30 million, with project duration up to 5 years. Local companies may apply for a maximum of \$20 million on a matching basis to fund no more than two-thirds of the total project cost, with project duration up to 3 years. Moreover, the GTF provides rental subsidy to companies established within 2 years prior to the deadline of the respective round of applications, with a ceiling set at 15% of the total funding amount requested. To encourage more eligible organisations to apply for the GTF, the Secretariat organises webinars to introduce the application procedures, priority themes and assessment criteria of the GTF. The webinar for the first round of applications was attended by more than 400 participants. The webinar for the second round of applications held in January this year attracted up to 470 participants.

The GTF places great emphasis on practical application. We welcome and encourage R&D institutes to apply for the GTF to develop low-carbon technologies with high application and commercialisation potential that cater for the specific needs of Hong Kong's environment and market. The technologies to be developed should be specific to Hong Kong's circumstances and challenges, and have clear prospect for commercialisation/application in local context. We will also share and promote project outcomes on the GTF website to encourage further development and practical application.

Since the Government launched the Streamlining of Government Services Programme in 2019, the Environment Bureau and the Environmental Protection Department have progressively rolled out various electronic service initiatives to streamline the application procedures of funding schemes related to environmental protection, including the GTF, the Environment and Conservation Fund, the New Energy Transport Fund, the Recycling Fund, etc.

## Projects approved under the Green Tech Fund

	<b>Project title</b>	<b>Applicant</b>	<b>Category of Organisation</b>
<b>New energy and renewable energy</b>			
1	Development of High Performance and Long Life Hydrogen Fuel Cell Stacks	The Hong Kong University of Science and Technology	Public Research Institute
2	Development of Printable Perovskite Solar Cells for Transformative Clean Energy and Sustainable Society	City University of Hong Kong	Public Research Institute
3	A safe, efficient and facile approach for hydrogen storage and generation: catalytic hydrolysis of solid-state hydrogen storage materials	The Hong Kong Polytechnic University	Public Research Institute
4	Green Hydrogen Production from Active Flow Membraneless Electrolyzers	The Hong Kong University of Science and Technology	Public Research Institute
5	Turning Water into the Source of Solar Hydrogen via Photocatalyst Panel	City University of Hong Kong	Public Research Institute
<b>Transport electrification</b>			
6	Smart Power Conditioners Using Second Life Electric Vehicle (EV) Batteries	City University of Hong Kong	Public Research Institute
7	Agile and Dynamic Control Technologies to Enhance System Stability and Power Quality Considering Renewables and Electrical Vehicle Impacts	CAFEA Smart City Limited	Company
<b>Low-carbon waste management</b>			
8	Reducing Biological Landfill Leachate Treatment Footprint via Rapid Electrochemical-UV Technologies	The Hong Kong University of Science and Technology	Public Research Institute
9	Coupling AnMBR and PNA for Compact - and Energy-Saving Landfill Leachate Treatment	The University of Hong Kong	Public Research Institute
<b>Promotion of circular economy and turning waste into resources</b>			
10	Biochar-enhanced Construction Materials for Sustainable Waste Management and Decarbonisation	The Hong Kong Polytechnic University	Public Research Institute
11	Recycling of waste lithium-ion batteries as highly active fuel cell catalysts	The Hong Kong Polytechnic University	Public Research Institute

	<b>Project title</b>	<b>Applicant</b>	<b>Category of Organisation</b>
<b>Smart waste management</b>			
12	Green Intelligent Garbage Bag Assessment System	United Microelectronics Centre (Hong Kong) Limited	Company
<b>Smart and real-time air quality monitoring</b>			
13	Temperature and Humidity Impact Free Gas Sensor and Monitor System Development for Real-time High Performance Air Quality Monitoring	Sundial Technology Development Limited	Company
14	Portable and low-cost sensors for the ambient air monitoring of BTEX and other volatile organic compounds	City University of Hong Kong	Public Research Institute

- End -

**ENB031**

**CONTROLLING OFFICER'S REPLY**

**(Question Serial No. 0149)**

Head: (44) Environmental Protection Department

Subhead (No. & title): (-) Not specified

Programme: (2) Air and Climate Change

Controlling Officer: Permanent Secretary for the Environment / Director of Environmental Protection (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

In paragraphs 159 and 160 of the Budget Speech, it is stated that an additional sum of \$1.5 billion will be injected into the EV-charging at Home Subsidy Scheme (EHSS), and that some existing petrol or liquefied petroleum gas filling stations will be gradually converted into quick charging stations. According to the information, the Government launched the \$2 billion EHSS in October 2020. As at January this year, about 560 applications involving 115 000 parking spaces have been received, among which 240 applications were approved with an overrun of \$700 million. In this connection, please provide information on the following:

- a. It is stated in the Budget that an additional sum of \$1.5 billion will be injected to extend the EHSS for 4 years. However, after deducting the overrun amount, there will only be a balance of \$800 million. Is it sufficient to meet the market demand?
- b. What is the estimated number of private car parking spaces across the territory that can be added with charging facilities? How many parking spaces are eventually targeted to be subsidised for modification? What is the estimated expenditure involved?
- c. Regarding the gradual conversion of some petrol filling stations into quick charging stations, what are the details, implementation timetable and the target number of petrol filling stations involved?
- d. With the promotion of the vehicle replacement scheme, the problem of abandoned vehicles may become more serious due to the lack of interest for old fuel-propelled private cars in the second-hand market. Will the Government allocate additional resources to properly resolve this issue?

Asked by: Hon TSE Wai-chuen, Tony (LegCo internal reference no.: 24)

Reply:

- a & b. The Government launched the \$2 billion EV-charging at Home Subsidy Scheme (EHSS) in October 2020 to promote installation of electric vehicle charging-enabling infrastructure (EVCEI) in car parks of existing private residential buildings. Given the overwhelming response, we proposed to inject an additional sum of \$1.5 billion to extend the EHSS for 4 years to the 2027-28 financial year, so

that the whole EHSS would support the installation of EVCEI for a total of about 140 000 parking spaces in some 700 car parks of existing private residential buildings, accounting for about half of the eligible parking spaces in Hong Kong. We will conduct a review again according to the market response and development before the extended EHSS is completed.

- c. The Government is currently reviewing a number of petrol filling station (PFS) sites to be re-tendered, which includes studying the feasibility of gradually converting these sites into quick charging stations in the medium and long term. We will also explore the feasibility of developing some larger petrol or liquefied petroleum gas filling station sites under the “single site, multiple use” model for different uses, including mega charging stations for charging various types of electric vehicles (EVs) simultaneously.

The Environmental Protection Department is currently working on the respective planning work arising from this initiative. We obtained approval from the Town Planning Board in December 2021 to include EV charging in the planned uses of PFS sites. At present, we are in the process of revising the Hong Kong Planning Standards and Guidelines and locating suitable PFS sites for conducting trial runs. We expect that tender invitation will be issued next year for the first PFS site to be converted into a quick charging station.

- d. To avoid increasing the overall number of vehicles while promoting the use of EVs, the Government introduced the “One-for-One Replacement” Scheme on 28 February 2018. The Scheme provides a higher first registration tax concession to owners who purchase EVs after arranging for proper scrapping and de-registering of their old private cars (PCs) with the Transport Department. Over 90% of the new electric PC owners have joined the Scheme since its introduction, which means more than 16 000 old PCs have been properly scrapped.

- End -



**CONTROLLING OFFICER'S REPLY**

**ENB032**

**(Question Serial No. 0250)**

Head: (44) Environmental Protection Department

Subhead (No. & title): (-) Not specified

Programme: (2) Air and Climate Change

Controlling Officer: Permanent Secretary for the Environment / Director of Environmental Protection (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

Regarding the Ex-gratia Payment Scheme for Phasing Out Euro IV Diesel Commercial Vehicles (the Scheme), please advise this Committee of the following:

1. Diesel commercial vehicles registered in 2006 have to apply for the ex-gratia payment before 31 December 2021. For each type of the eligible vehicles, please set out by year the numbers and percentages of those having applied for the Scheme and the ex-gratia payment amount involved;
2. Due to the epidemic, many commercial vehicle owners cannot afford to replace their old diesel vehicles with new ones and have to continue working with their old vehicles. In this connection, will the Administration consider postponing the deadlines for cancelling the vehicle registration set at the end of last year and this year respectively, so that vehicle owners who missed the deadline last year will still have a chance to apply for the ex-gratia payment, and owners of vehicles registered in 2007 will not need to rush to deregister their vehicles by the end of this year?

Asked by: Hon YICK Chi-ming, Frankie (LegCo internal reference no.: 6)

Reply:

1. Regarding the Ex-gratia Payment Scheme for Phasing Out Euro IV Diesel Commercial Vehicles (the Scheme), as at January 2022, the numbers of eligible vehicles, the numbers of applications received and approved, as well as the ex-gratia payment amount involved by vehicle class and year of first registration are tabulated below:

Vehicle class		Number of Euro IV diesel commercial vehicles (percentage in the total number of the vehicles concerned)							
		Year of first registration							Total
		2006	2007	2008	2009	2010	2011	2012	
Light goods vehicle	Number of vehicles*	270	4 274	5 004	2 236	3 635	4 180	3 889	23 488
	Number of applications received	267 (99%)	1 483 (35%)	1 189 (24%)	523 (23%)	597 (16%)	693 (17%)	450 (12%)	5 202 (22%)
	Number of applications approved	267 (99%)	1 431 (33%)	1 156 (23%)	511 (23%)	582 (16%)	676 (16%)	435 (11%)	5 058 (22%)
	Amount granted (\$m)#	32.6	154.0	128.4	57.8	67.2	76.8	49.1	565.9
Medium goods vehicle	Number of vehicles*	487	1 986	2 404	886	2 394	2 426	900	11 483
	Number of applications received	486 (100%)	1 073 (54%)	877 (36%)	234 (26%)	418 (17%)	235 (10%)	65 (7%)	3 388 (30%)
	Number of applications approved	486 (100%)	1 053 (53%)	863 (36%)	230 (26%)	404 (17%)	231 (10%)	63 (7%)	3 330 (29%)
	Amount granted (\$m)#	105.6	240.8	206.0	57.7	105.5	63.6	17.1	796.2
Heavy goods vehicle	Number of vehicles*	10	77	117	133	378	529	254	1 498
	Number of applications received	10 (100%)	36 (47%)	43 (37%)	41 (31%)	74 (20%)	61 (12%)	15 (6%)	280 (19%)
	Number of applications approved	10 (100%)	35 (45%)	42 (36%)	41 (31%)	72 (19%)	58 (11%)	15 (6%)	273 (18%)
	Amount granted (\$m)#	3.7	12.1	16.5	15.2	27.2	21.8	5.6	102.1
Light bus	Number of vehicles*	7	129	185	55	107	128	55	666
	Number of applications received	7 (100%)	49 (38%)	55 (30%)	10 (18%)	12 (11%)	29 (23%)	10 (18%)	172 (26%)
	Number of applications approved	7 (100%)	48 (37%)	55 (30%)	10 (18%)	11 (10%)	29 (23%)	10 (18%)	170 (26%)
	Amount granted (\$m)#	1.6	11.1	13.3	2.5	2.8	7.4	2.6	41.2
Non-franchised bus	Number of vehicles*	46	320	538	369	514	492	256	2 535
	Number of applications received	40 (87%)	144 (45%)	176 (33%)	79 (21%)	80 (16%)	90 (18%)	16 (6%)	625 (25%)
	Number of applications approved	39 (85%)	140 (44%)	173 (32%)	79 (21%)	76 (15%)	88 (18%)	15 (6%)	610 (24%)
	Amount granted (\$m)#	14.9	55.9	74.1	35.4	36.5	41.2	6.8	264.7

Vehicle class		Number of Euro IV diesel commercial vehicles (percentage in the total number of the vehicles concerned)							
		Year of first registration							Total
		2006	2007	2008	2009	2010	2011	2012	
Total	Number of vehicles*	820	6 786	8 248	3 679	7 028	7 755	5 354	39 670
	Number of applications received	810 (99%)	2 785 (41%)	2 340 (28%)	887 (24%)	1 181 (17%)	1 108 (14%)	556 (10%)	9 667 (24%)
	Number of applications approved	809 (99%)	2 707 (40%)	2 289 (28%)	871 (24%)	1 145 (16%)	1 082 (14%)	538 (10%)	9 441 (24%)
	Amount granted (\$m)#	158.3	473.9	438.3	168.6	239.2	210.7	81.2	1 770.2

\* The number of registered vehicles as at the end of September 2019.

# May not add up to the total amount granted due to rounding.

- The Government has consulted the transport trade, stakeholders and Panel on Environmental Affairs of the Legislative Council before implementing the Scheme. Besides, the arrangements under the Ex-gratia Payment Scheme for Phasing Out Pre-Euro IV Diesel Commercial Vehicles have been adopted again this time so that the ex-gratia payment is delinked from the purchase of a replacement vehicle by the vehicle owner in order to give the latter more flexibility to choose whether or not and when to purchase a replacement vehicle accordingly. The Government will keep in close view the overall implementation of the Scheme for timely adjustment where necessary.

- End -

**CONTROLLING OFFICER'S REPLY**

**ENB033**

**(Question Serial No. 0251)**

Head: (44) Environmental Protection Department

Subhead (No. & title): (-) Not specified

Programme: (2) Air and Climate Change

Controlling Officer: Permanent Secretary for the Environment / Director of Environmental Protection (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

Regarding the promotion of electric vehicles, please inform this Committee of the following:

1. What is the current progress of the preparatory work on electric public light buses, electric ferries and electric taxis?
2. It is stated in the Budget Speech that the Government is preparing to gradually convert some existing petrol or liquefied petroleum gas (LPG) filling stations into quick charging stations, so as to support the provision of charging services for more diverse types of vehicles. However, the charging process is time-consuming, and there were complaints from time to time against vehicles queuing at some LPG filling stations for refilling, thereby causing obstruction to other road users. In this connection, what are the details of the relevant plan (including how to avoid further obstruction to traffic) and the expenditure involved?
3. To encourage more housing estates to install charging facilities, will the Administration consider relaxing the application requirement of "a car park having less than 60% of the total number of the parking spaces in open area" in the EV-charging at Home Subsidy Scheme? If yes, what are the details? If no, what are the reasons?

Asked by: Hon YICK Chi-ming, Frankie (LegCo internal reference no.: 7)

Reply:

**1. Trial scheme for electric public light buses (e-PLBs)**

Having provisionally determined the routes for the trial scheme in 2021, the Government is further studying the feasibility of the individual routes and will liaise and discuss with the public light bus operators concerned the arrangements of the trial scheme. In addition, we invited proposals from electric vehicle (EV) suppliers interested in supplying e-PLBs at the end of 2021 and are now vetting the proposals received. Given the lead time to develop and manufacture e-PLBs that suit Hong Kong, it is anticipated that the trial scheme will commence officially in 2023.

### **Pilot scheme for electric ferries (e-ferries)**

The Government is preparing to launch a pilot scheme for e-ferries in 4 in-harbour ferry routes and will provide full subsidies to the ferry operators for the construction of 4 e-ferries and the associated charging facilities, as well as the operational, maintenance and repair expenditures involved for testing the e-ferries during the 24-month trial period.

The Government has established an inter-departmental working group to work out the details of the pilot scheme, oversee its progress and evaluate the performance of the e-ferries. The Environmental Protection Department (EPD) has also engaged a consultant to design the e-ferries and the associated charging facilities, and assist the ferry operators to prepare technical specifications for issuing open tenders for the construction of e-ferries. The Government has signed subsidy agreements with some of the ferry operators, and will issue tenders for the construction of e-ferries and the associated charging facilities later this year. We anticipate that the pilot scheme will commence in 2023 tentatively.

### **Trial of electric taxis (e-taxis)**

The Government is working with the taxi trade on the trial of e-taxis under the New Energy Transport Fund, and has approved 4 applications for the trial of e-taxis early this year. We will install by phases no less than 10 dedicated quick chargers in Lantau Island and Sai Kung this year, as well as identify suitable locations (such as taxi stands) across the territory for setting up dedicated charging facilities for taxis to promote wider use of e-taxis. In addition, we have been actively liaising with vehicle suppliers to encourage them to supply suitable e-taxi models for use in Hong Kong. We will keep a close eye on the latest development of e-taxis in the market and the views of the trade to enhance the trial scheme and the charging network of e-taxis.

2. The Government is currently reviewing a number of petrol filling station (PFS) sites to be re-tendered, which includes studying the feasibility of gradually converting these sites into quick charging stations in the medium and long term. Suitable PFS sites will be located for conducting trial runs and the appropriate operational modes will be studied with feasible measures considered to reduce the potential impact on the traffic before coming up with the design and estimated costs of the charging stations. We expect that tender invitation will be issued next year for the first PFS site to be converted into a quick charging station.
3. Given the overwhelming response since the launch of the EV-charging at Home Subsidy Scheme (EHSS) in October 2020, the Government has proposed to inject an additional sum of \$1.5 billion to meet the demand. The EPD is further reviewing the EHSS, hoping to benefit more residential building car parks with limited resources and help the conventional car owners prepare for the transition to EVs.

- End -

**ENB034**

**CONTROLLING OFFICER'S REPLY**

**(Question Serial No. 0401)**

Head: (44) Environmental Protection Department

Subhead (No. & title): (-) Not specified

Programme: (2) Air and Climate Change

Controlling Officer: Permanent Secretary for the Environment / Director of Environmental Protection (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

Matters Requiring Special Attention in 2022-23 include taking forward measures set forth in the Clean Air Plan for Hong Kong 2035. Please inform this Committee of the following:

1. What is the latest work progress in respect of taking forward the adoption of Liquefied Natural Gas (LNG) in ocean-going vessels as part of the measures?
2. The adoption of LNG in ocean-going vessels is a global trend. Given that the offshore LNG terminal will officially operate this year, what is the latest schedule of the Government in promoting Hong Kong as an LNG bunkering hub for ocean-going vessels, including formulating technical requirements and related safety regulations and requirements for offshore LNG bunkering? Will the Government consider providing subsidies to encourage the marine bunkering industry to provide LNG bunkering service? If yes, what are the details? If no, what are the reasons?
3. What are the expenditure and resources involved regarding the work on taking forward the adoption of LNG in ocean-going vessels?

Asked by: Hon YICK Chi-ming, Frankie (LegCo internal reference no.: 10)

Reply:

The use of Liquefied Natural Gas (LNG) in vessels helps improve air quality and reduce carbon emissions. With the increasing popularity of LNG-fuelled ocean-going vessels around the world, the development of LNG bunkering facilities for vessels in Hong Kong can enable the refuelling of ocean-going vessels entering Hong Kong with LNG, thereby enhancing Hong Kong's position and competitiveness as an international port and facilitating the adoption of LNG in local vessels and river trade vessels.

The Government is exploring the use of the offshore LNG terminal newly constructed by the two power companies as a bunkering facility for ocean-going vessels. Meanwhile, we will examine other measures to take forward the adoption of LNG in ocean-going vessels, including planning for LNG bunkering areas and formulating technical requirements and related safety regulations and requirements for offshore LNG bunkering.

Following the announcement of our plan to take forward the adoption of LNG in vessels in the Clean Air Plan for Hong Kong 2035 in June 2021, the Government has liaised with relevant stakeholders including the marine trade and the power companies to learn about the issues that need to be considered and dealt with in setting up local LNG bunkering facilities. We will continue to liaise closely with relevant stakeholders to map out the detailed arrangements for taking the matter forward. The work on promoting the adoption of LNG in vessels is being carried out with the existing manpower and resources. The relevant departments do not have a breakdown of the related expenditure and resources.

- End -

**ENB035**

**CONTROLLING OFFICER'S REPLY**

**(Question Serial No. 0673)**

Head: (44) Environmental Protection Department

Subhead (No. & title): (-) Not specified

Programme: (2) Air and Climate Change

Controlling Officer: Permanent Secretary for the Environment / Director of Environmental Protection (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

The Government has done a lot of work to promote green technologies, including continuous capital injection into the Green Tech Fund to support green research and development (R&D) projects. However, enhancing the management services and promotion of application of green technology to facilitate realisation of green R&D outcomes for creating a better green living environment for the public are important aspects the Government should work on in respect of applied technologies, so as to bring benefits and convenience to the public. Please advise whether relevant measures have been adopted in the past few years and how the funding has been used? What factors will be taken into account in the funding arrangements of this year?

Asked by: Hon YIM Kong (LegCo internal reference no.: 7)

Reply:

The Government announced in the 2020-21 Budget that \$200 million would be allocated for setting up the new Green Tech Fund (GTF) to provide better and more focused funding support for the research and development (R&D) and application of decarbonisation and green technologies, so as to expedite low-carbon transformation and enhance environmental protection in Hong Kong. The GTF is administered by the Environment Bureau (ENB). The first round of applications for the GTF was open in December 2020 with over 190 applications received. Upon deliberation, the Assessment Committee approved a total of 14 projects, including 11 applications from 4 local higher education institutions and 3 applications from 3 private enterprises, involving a total grant of around \$70 million. The R&D projects approved cover a wide range of topics, including the promotion and development of new energy and renewable energy, promotion of transport electrification, turning of waste into resources, low-carbon waste management technologies, and smart waste management, etc. The second round of applications for the GTF was open from 17 December 2021 to 25 February 2022 with around 100 applications received. The Assessment Committee will consider these applications in accordance with the assessment criteria set out in the Guide to Applicants of the GTF.



The GTF has a balance of around \$130 million. The Budget for the 2022-23 financial year proposed an injection of an additional funding of \$200 million into the GTF, with a view to further promoting decarbonisation and enhancing environmental protection in Hong Kong. Based on the experience in the first round of GTF applications in which 14 projects involving a total grant of around \$70 million were approved, it is expected that the injection of \$200 million can subsidise some 40 additional projects. The funding injected will primarily be used to subsidise projects in priority areas such as net-zero electricity generation, energy saving and green buildings, green transport and waste reduction.

The GTF places great emphasis on practical application. We welcome and encourage R&D institutes to apply for the GTF to develop low-carbon technologies with high application and commercialisation potential that cater for the specific needs of Hong Kong's environment and market. The technologies to be developed should be specific to Hong Kong's circumstances and challenges, and have clear prospect for commercialisation/application in local context. We will also share and promote project outcomes on the GTF website to encourage further development and practical application.

The Environment and Conservation Fund (ECF), which is also administered by the ENB, provides funding support to research projects related to green technologies. In the past 3 years, the funding scheme "Environmental Research, Technology Demonstration and Conference Projects" under the ECF has financed a total of 54 projects related to green technologies, covering projects related to green buildings, effluent and waste management, energy saving and carbon emission reduction, environmental monitoring, etc., and involving a funding amount of about \$37 million. The ECF will continue to promote green technologies in Hong Kong on various fronts by providing funding support to local higher education institutions and non-profit-making organisations for conducting environmental researches, so as to promote and develop practical new green technologies as well as cultivate talents in related fields.

- End -

**ENB036**

**CONTROLLING OFFICER'S REPLY**

**(Question Serial No. 0842)**

Head: (44) Environmental Protection Department

Subhead (No. & title): (-) Not specified

Programme: (1) Waste

Controlling Officer: Permanent Secretary for the Environment / Director of Environmental Protection (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

Regarding the Integrated Waste Management Facilities, please inform this Committee of the following:

1. After achieving the target of “Zero Landfill”, how will the existing landfills be dealt with? What are the anticipated schedules for closure? Please list out the information in tabular form.

Asked by: Hon ZHANG Xinyu, Gary (LegCo internal reference no.: 4)

Reply:

The Environment Bureau announced the Waste Blueprint for Hong Kong 2035 (the Blueprint) on 8 February 2021, setting out the vision of “Waste Reduction • Resources Circulation • Zero Landfill”. In accordance with the vision and strategies laid down in the Blueprint, should sufficient waste-to-energy/resources facilities with adequate treatment capacity be in place by around 2035, we will no longer need to rely on landfills for direct disposal of our municipal solid waste (MSW). By then, only a small amount of waste that is non-combustible and cannot be recycled or reused will be directly disposed of at the landfill.

In view of the current progress of the 3 landfill extension projects, it is anticipated that the original sites and extension parts of the South East New Territories Landfill and the North East New Territories Landfill will reach their full capacities and be closed by 2035. Restoration works will be completed in subsequent years after the closure of the landfills. However, it takes a longer period of time for the ground settlement problem of the landfills to become stabilised. In the medium term, the land uses of the landfills are subject to numerous constraints such as geographical and environmental factors, potential risks of differential ground settlements, adjoining land uses and developments, as well as the community’s demand, etc. We will timely discuss with and consult the local community and other stakeholders on the land uses of the landfills after their closure. As for the West New Territories Landfill, it is expected that the extension part will no longer accept MSW

after around 2035, and only waste that is non-combustible and cannot be recycled or reused will continue to be disposed of at the landfill.

- End -

**ENB037**

**CONTROLLING OFFICER'S REPLY**

**(Question Serial No. 0846)**

Head: (44) Environmental Protection Department

Subhead (No. & title): (-) Not specified

Programme: (2) Air and Climate Change

Controlling Officer: Permanent Secretary for the Environment / Director of Environmental Protection (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

The EV-charging at Home Subsidy Scheme (EHSS) has received overwhelming response from private housing estates and members of the public. In this connection, please advise this Committee of the following:

- 1) The total number of applications received for the first round of the EHSS.
- 2) If all the applications of the first round are approved, given an original estimate of \$2 billion, what would the cost overrun be?
- 3) To benefit more people and promote electric vehicles more effectively, will the Government clearly define the eligibility of applicants and the terms of funding in the second round of applications such that the large housing estates in Hong Kong can submit applications according to their Deed of Mutual Covenant?

Asked by: Hon ZHANG Xinyu, Gary (LegCo internal reference no.: 8)

Reply:

- 1) & 2) The Government launched the \$2 billion EV-charging at Home Subsidy Scheme (EHSS) in October 2020 to promote installation of electric vehicle charging-enabling infrastructure (EVCEI) in car parks of existing private residential buildings. Up to the end of February 2022, the Environmental Protection Department has received over 560 applications (involving about 115 000 parking spaces) from the 18 districts across the territory. This is almost double of our original target of 60 000 parking spaces. The amount of subsidy required has exceeded \$2.7 billion.
- 3) As the subsidy under the EHSS is provided using public resources, in order to exercise prudent use of public funding, to effectively control the financial burden of the whole EHSS and to maximise the effectiveness of the EHSS, a ceiling of subsidy has been set (i.e. \$30,000 per parking space, or \$15 million for the entire development, whichever is lower), so as to assist more residential estates covering various districts to install EVCEI. Residential estates/buildings with a common estate name or buildings being geographically adjacent to each other and with

related estate/building names will be regarded as the same development under the EHSS. Currently, many large-scale and multi-phase residential estates have applied for subsidy under the EHSS, and the relevant applications are approved according to this criterion.

In continuing the implementation of the EHSS, the Government will take into account the experience and data obtained from the EHSS in a timely and comprehensive manner, including the price level for the installation of EVCEI under the EHSS, and may adjust the subsidy framework if necessary. The general direction is to follow the original intent of the EHSS, that is to make the best use of public resources to subsidise more residential estates to install EVCEI.

- End -

**CONTROLLING OFFICER'S REPLY**

**ENB038**

**(Question Serial No. 0255)**

Head: (137) Government Secretariat : Environment Bureau

Subhead (No. & title): (000) Operational expenses

Programme: (1) Director of Bureau's Office

Controlling Officer: Permanent Secretary for the Environment (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

There is no change in the staff establishment for this year when compared with last year, which stands at 56 posts. The revised estimate for "Mandatory Provident Fund contribution" last year was HK\$119,000, representing an increase of about 40% over the original estimate, whereas the estimate for this year decreases by about 48.7%. Please explain the reasons for the cost overrun last year and the substantial reduction in the estimate for this year.

Asked by: Hon CHAN Chun-ying (LegCo internal reference no.: 5)

Reply:

Civil servants are entitled to the benefits under the Civil Service pension schemes or the Civil Service Provident Fund Scheme according to their respective terms of employment. For the staff who have not completed their probationary period, they are entitled to the mandatory provident fund contributions under the Mandatory Provident Fund Schemes Ordinance. The Environment Bureau (ENB), having regard to manpower deployment or individual staff's completion of probationary period, adjusts the revised estimate for "Mandatory Provident Fund Contribution" accordingly every year to accurately reflect the ENB's actual expenditure on mandatory provident fund contributions.

- End -

**CONTROLLING OFFICER'S REPLY**

**ENB039**

**(Question Serial No. 0263)**

Head: (137) Government Secretariat : Environment Bureau

Subhead (No. & title): (000) Operational expenses

Programme: (3) Sustainable Development

Controlling Officer: Permanent Secretary for the Environment (Janice TSE)

Director of Bureau: Secretary for the Environment

Question:

One of the responsibilities of the Sustainable Development Division is to implement the education and publicity programmes of the Council for Sustainable Development. In the Matters Requiring Special Attention in 2022-23, this includes implementing the School Outreach Programme and the School Award Programme. Please advise this Committee of the estimated manpower and funding required for the above programmes.

Asked by: Hon CHAN Chun-ying (LegCo internal reference no.: 33)

Reply:

The Environment Bureau (ENB) has been assisting the Council for Sustainable Development (SDC) in carrying out various education and publicity activities. The major programmes in progress are as follows:

(1) Sustainable Development School Outreach Programme

This programme aims at promoting the concepts and practices of sustainable development among secondary school students through organising seminars, workshops and drama performances in schools. In the 2021/22 school year, the programme was formally extended to primary schools. A total of 101 schools (78 secondary schools and 23 primary schools) have enrolled for 93 drama performances, 35 seminars and 41 workshops, with an estimated participation of 25 500 teachers and students (the actual number might be affected by the COVID-19 epidemic situation). The outreach programme for the 2022/23 school year will be open for enrolment in mid-2022. The estimated expenditure for 2022-23 is about \$1.5 million.

(2) Sustainable Development School Award Programme

This programme is a biennial school year programme which aims at encouraging schools to participate in and organise sustainable development related activities so that students can put sustainable development concepts into practice in schools and in the community. A total of 54 schools have enrolled for the current round (2020/21 and 2021/22 school years) of the programme, with an estimated participation of 100 000 teachers, students and members of the community (the actual number might be affected by the COVID-19

epidemic situation). The award programme for the 2022/23 and 2023/24 school years will be open for enrolment in mid-2022. The estimated expenditure for 2022-23 is about \$380,000.

(3) E-Learning Platform on Long-term Decarbonisation

The SDC and the Education Bureau have collaborated to launch an e-learning platform (the Platform) in April 2021. Based on the senior secondary curriculum, the Platform focuses on enhancing the effectiveness of learning and teaching of decarbonisation in its design, with interactive games and challenges, multimedia resources and other reference materials being included. As at February 2022, the Platform has attracted over 35 000 online visitors. We will carry out timely updating to introduce relevant new measures and additional resources of the ENB and the Environmental Protection Department. The estimated expenditure for 2022-23 is about \$120,000.

The above programmes are supported by 8 staff members of the SDC Secretariat.

- End -