

**Memorandum for the Commercial Properties Committee of
the Hong Kong Housing Authority**

**Progress Update on the Use of Electric Vehicle Charging Facilities
at Housing Authority's Carparks**

PURPOSE

This paper provides an update on the use of electric vehicle (EV) charging facilities in new and existing carparks under the Housing Authority (HA) for hourly and monthly parking.

BACKGROUND

2. To support Government's policy to promote the wider use of EVs for environmental protection, the HA has been collaborating with the power companies since 2012 to install quick and semi-quick chargers at some hourly parking spaces in six HA's existing carparks^{Note 1}. At the same time, the HA has been providing EV charging facilities^{Note 2} in new carparks. Details of provision are listed at **Annex A**.

3. Initially, these EV charging facilities were used by drivers for hourly parking only. With wider use and increasing commercial production of EVs in the past few years, the number of EVs has continued to increase^{Note 3} and applications for EV charging facilities by monthly users in HA's existing carparks have been received since last year.

Note 1 The six carparks are located in Choi Tak, Kwai Chung, Shui Pin Wai, Tak Long and Yue Wan Estates as well as Yau Lai Shopping Centre.

Note 2 According to updated Hong Kong Planning Standards and Guidelines in 2011, all parking spaces for private cars in new carpark buildings are required to be EV charging enabling and among which at least 30% to be provided with standard charging facilities. Standard EV charging facilities include the provision of a 13A socket at each parking space and associated wiring installations while EV charging enabling is similar to the standard charging facilities except the provision of the 13A socket outlet at each parking space.

Note 3 According to the Environmental Protection Department, there are 5 579 EVs for road use as at end of June 2016 while there were only some 200 EVs as at end of July 2011.

4. To address the applications of EV monthly parking spaces and cater for future demand in HA's carpark, Members endorsed vide Paper No. CPC 16/2015 in August 2015 that HA would bear the cost to provide the standard charging facilities to monthly parking spaces in existing carpark without EV charging facilities on need basis and subject to the existing provisions of both building works and building services currently available in the existing carpark. Such measure can draw the gap between HA's new and existing carpark closer and attain consistency in policy as far as practicable, as well as ensure the newly installed facilities will be under the Department's regular inspection and proper maintenance. Apart from paying the normal monthly charges for the parking space, the users are required to apply to the corresponding power companies on their own for a separate meter for the charging facilities provided for individual car parking space and settle the electricity bills directly under the user-to-pay principle.

PROGRESS UPDATE

Hourly Parking

5. Under the collaboration with the power companies to install quick and semi-quick chargers at the hourly parking spaces in six HA's existing carpark, the power companies have been offering free electricity to EV drivers during charging in these carpark. Meanwhile, subject to review annually, HA is providing a maximum of two hours free parking for EVs during charging ^{Note 4}.

6. For the hourly parking spaces provided with standard charging facilities in new housing developments, HA is also offering a maximum of two hours free parking for EVs during charging and, following the market norm, not charging any fees for electricity consumption ^{Note 5}.

7. The usage of EV charging facilities at the hourly parking spaces in HA's carpark has been low since the first installation, only 91 EVs were recorded in 2012, but the EV number has been increasing significantly to 3 503 in 2015. The figures of usage in these few years are shown at **Annex B**.

Note 4 The current hourly parking charges for private cars are \$14 in urban areas and \$10 in New Territories.

Note 5 The electricity fee for EV charging is about \$3 per hour.

Monthly Parking in Existing Carparks

8. Upon Members' endorsement vide Paper No. CPC 16/2015 in August 2015, the Department reviewed the applications from carpark users in both new and existing carparks to rent monthly parking spaces for charging their EVs. For existing carparks without EV charging facilities, we started the feasibility study for each application on individual basis. However, whether or how many charging facilities can be provided in individual carparks will be subject to the existing provisions of both building works and building services currently available in the existing carparks and other limitations and constraints. For example, there may be difficulty in obtaining consent from individual Owners' Corporations when the facilities to be installed fall within common areas (e.g. switch room) of Home Ownership Scheme (HOS) courts / Tenants Purchase Scheme (TPS) estates. On the other hand, while provision of power supply to just several numbers of standard charging facilities in most of the existing carparks is usually technically feasible, provision of these facilities in large number may be limited by the capacity of current power supply in the switch room in individual carparks and upgrading the capacity of power supply in existing carparks is considered not cost-effective.

9. Meanwhile, upon confirmation of feasibility and obtaining the consent of relevant parties such as power company and Owners' Corporations (for HOS courts / TPS estates), installation works for power connection to the parking spaces concerned have commenced after the 2016 annual application exercise for allocation of parking spaces^{Note 6}. Up till now, a total of nine standard EV charging facilities (13A) at four existing carparks have been installed in which three have been let to monthly users for charging their EVs already. Based on the installation works recently completed at the four sites, the average installation cost is \$5,500 per 13A standard EV charging facility. In addition, there is one monthly parking space in a new carpark built with standard charging facilities let for EV charging, and we are now processing six applications in some existing carparks without EV charging facilities^{Note 7}.

----- Detailed information is listed at **Annex C**.

Note 6 The HA's monthly parking spaces are let on a yearly basis. By end of each year, users are required to submit fresh applications for renting monthly parking spaces for the next year. Sometimes, ballot for allocation of parking spaces is required when demand exceeds supply.

Note 7 Including carparks in Choi Ying Estate and Chun Man, Easeful, Tung Shing, Tung Tao and Yi Fung Courts.

Letting of Monthly Parking Spaces for EV Charging

10. It is anticipated that more and more parking spaces in HA's existing carpark will be installed with standard EV charging facilities (13A) for letting to monthly users. By the end of this year, the yearly licenses for renting EV parking spaces and all other non-EV parking spaces will expire. Under the current practice, a ballot for allocation of parking spaces for the following year will be conducted when demand exceeds supply in a carpark. To make better use of the EV charging facilities installed, we have considered whether a separate queue should be arranged for EV monthly users. However, considering that non-EV users are currently still the predominant users of monthly parking spaces and the generally high utilisation rate of HA's carparks, with full lettings in some of them, we will for the time being maintain the current arrangement of a single queue for all applications in accordance with the existing priority arrangement ^{Note 8}, i.e. without segregation of queue for EV and non-EV monthly users, to ensure fair allocation. For better use of resources, we will, at the same time, reserve the EV parking spaces for allocation to EV users as far as practicable. The EV parking spaces will only be let to non-EV users when there is no demand from EV users, e.g. where there is no application from EV users or no EV users succeed in the ballot, or where the users change their EV to non-EV during the year and there is no non-EV parking space available for relocation due to full utilisation of the carparks concerned.

Note 8 The existing priority arrangement in letting of HA's monthly parking spaces -

Priority	Description
First	Tenant / family member / applicant (the car owner working in Public Rental Housing (PRH) / Tenants Purchase Scheme (TPS) / factory estates / shopping centres or Home Ownership Scheme (HOS) courts) who is disabled and holding a Disabled Person's Parking Permit.
	Tenant / family member holding a Parking Certificate for Drivers who Carry People with Mobility Disabilities and the disabled should be the tenant / family member.
Second	Tenant / family member is the applicant and the vehicle owner.
Third	Tenant / family member is the applicant as well as the vehicle driver and is authorised to drive by the vehicle owner.
Fourth	Any other applicants.

In the context of application for monthly parking spaces, tenant refers to a tenant of PRH / TPS / factory estates and shopping centres and also includes a flat owner of HOS courts or TPS estates; family member refers to an authorised person of the tenancy concerned or an authorized occupant of the property concerned.

Surplus parking spaces will be let to outsiders only after approval given by relevant authority.

11. In case of limitations or constraints as mentioned in paragraph 8 above resulting in provision or additional provision of charging facilities in existing carparks infeasible or in case EV monthly users could not secure EV parking spaces in the annual balloting exercise, the users concerned may make use of the charging points available in nearby carparks to charge their EVs. Information of the charging points in the territory as provided by Environmental Protection Department is at **Annex D**. EV users may also make use of the hourly EV parking spaces if the same are available in the HA's carparks concerned. In view of the rapid development of new technology, drivers may also have their EVs charged conveniently through other means, such as the newly invented mobilised EV charger.

FINANCIAL IMPLICATIONS

12. The installation cost of standard charging facilities for monthly parking spaces in four existing carparks in **Annex C** ranges from \$2,500 to about \$7,700 per space. The cost may vary according to different site conditions of the estates and the existing provisions of both building works and building services available in the carparks. Given the current scattered demand in small number, the cost can be met by the savings from the rates concession in respect of HA's carparks for 2016/17 ^{Note 9}. For requirements from 2017/18 onwards, appropriate funding will be sought in future budget exercises. On the other hand, HA is providing a maximum of two hours free parking for EVs during charging and free electricity consumption for charging EVs in the hourly parking spaces provided with standard charging facilities in new housing developments. The total of rental income foregone for free parking and the expenses incurred for electricity consumption is considered minimal in respect of the yearly carparks' income.

STAFFING AND INFORMATION TECHNOLOGY (IT) IMPLICATIONS

13. Additional workload in connection with the letting of EV parking spaces and the provision of support / advice in respect of building services and building works for installation of EV charging facilities can be absorbed by existing staff in view of the small number of applications for the time being. We will review the staffing implications again when more applications are received in future. There is no IT implication.

Note 9 In view of the small amount of rates concession for individual carpark users but a significant administrative cost involved for its distribution, the rates concession for HA's carparks for 2016/17 in the amount of \$0.58M has not been passed on to individual carpark users and would be invested on enhancing HA's carpark facilities such as upgrading of EV charging facilities at suitable sites.

PUBLIC REACTION/PUBLICITY

14. The provision of EV charging facilities dovetails with the government policy and facilities under the use of EVs, which will in turn improve roadside air quality and reduce greenhouse gas emissions and hence be welcomed by the public.

INFORMATION

15. This paper is issued for Members' information

Miss Michelle LAU
Secretary, Commercial Properties Committee
Tel. No. : 2761 7928
Fax No. : 2761 0019

File ref. : HD3-8/CPMU3/P-1/10/3
(Estate Management Division)
Date of Issue : 23 August 2016

Existing Charging Facilities at Housing Authority's Carparks

(I) Chargers installed by the Power Companies

Location of Carpark	Number of Hourly Parking Spaces Involved	Number of Chargers	
		Quick Chargers	Semi-quick Chargers
Choi Tak Estate	5	0	5
Kwai Chung Estate	7	0	7
Shui Pin Wai Estate	1	1	0
Yau Lai Shopping Centre	7	1	6
Tak Long Estate	1	1	0
Yue Wan Estate	1	1	0
Total	22	4	18

(II) Standard Charging Facilities (13A) installed by the Housing Authority

Location of Carpark	Total Number of Private Car Parking Spaces	Number of Private Car Parking Spaces Provided With			
		Standard Charging Facilities (13A)		EV Charging Enabling Facilities	
		Hourly	Monthly	Hourly	Monthly
Cheung Sha Wan Estate	30	3	8	6	13
Kai Ching Estate	140	6	35	19	80
Lower Ngau Tau Kok Estate	158	9	45	9	95
Mei Tin Estate*	297	10	10	0	0
Tak Long Estate	195	9	51	16	119
Domain* (shopping centre)	152	7	0	30	0
Hung Fuk Estate	139	3	39	21	76
Shui Chuen O Estate [#]	114	0	26	29	59
Total	1 225	47	214	130	442

* The carpark was designed and completed before the updated Hong Kong Planning Standards and Guidelines in 2011. Only a small portion of parking spaces in the carpark are provided with standard charging facilities.

Shui Chuen O Estate is to be completed in four phases and hourly parking spaces with standard charging facilities (13A) will be provided in due course.

**Usage of EV Charging Facilities in HA's Carparks
(for the period from 2012 to 31 July 2016)**

Year	Quick Charger		Semi-Quick Charger		Standard Charging Facility (13A)		Yearly Total	
	No. of Vehicles	No. of Hours for Free Parking	No. of Vehicles	No. of Hours for Free Parking	No. of Vehicles	No. of Hours for Free Parking	No. of Vehicles	No. of Hours for Free Parking
2012	81	81	10	20	0	0	91	101
2013	311	311	124	240	0	0	435	551
2014	638	638	190	335	7	11	835	984
2015	2 688	2 688	653	1 272	162	294	3 503	4 254
2016 (up to 31.7.2016)	2 525	2 525	509	1 018	525	1 050	3 559	4 593
Total	6 243	6 243	1 486	2 885	694	1 355	8 423	10 483

Letting of Monthly Parking Spaces for EV Charging
(Position as at 31 July 2016)

	Estate / Court (Note 1)	District	No. of standard EV charging facility (13A) installed	No. of monthly parking space let for EV charging (with electricity meter installed)	Total Cost (\$)
1	Hong Wah Court	Kwun Tong	3	Letting in progress	7,500
2	King Shan Court	Wong Tai Sin	1	1	7,000
3	Lei On Court	Kwun Tong	3	Letting in progress	23,000
4	Shui Pin Wai Estate	Yuen Long	2	2	12,000
5	Tak Long Estate	Kowloon City	Note 2	1	Note 2

Note 1 The existing carpark in Hong Wah, King Shan and Lei On Courts and Shui Pin Wai Estate have been installed with standard charging facilities upon request and confirmation of feasibility study with necessary consent from relevant parties obtained.

Note 2 Tak Long Estate is a new carpark with 30% of all the parking spaces for private cars (i.e. 60 parking spaces) provided with standard charging facilities, while other 70% of parking spaces for private cars are EV charging enabling (i.e. similar to the standard charging facilities except the provision of the 13A socket outlet at each parking space). The cost for provision of the standard charging facilities has been included in the development cost of the carpark of the Estate.

Information of Charging Points Provided by Environmental Protection Department
(Position as at 31 July 2016)

Area	No. of Carparks	Charging Point Quantity			
		Quick	Medium	Standard	Total
Hong Kong Island	63	50	91	360	501
Kowloon	91	57	96	316	469
New Territories	89	73	83	260	416
Total	243	180	270	936	1 386