



Beijing | Guangzhou | Hong Kong | Macau | Shanghai | Shenzhen

## **The Challenge of Developing EV Charger Network in a City**

Date: 5<sup>th</sup> May 2016

*電動車充電服務供應專家*  
*Professional Electric Vehicle (EV) Charging Service Providers*

# 解決電動車充電問題 使電動車普及化

Make Everywhere EV Ready  
Let EV Ready Everywhere





# EVs in EU and US





**Home Charging is Critical!!**





Asia Cities?

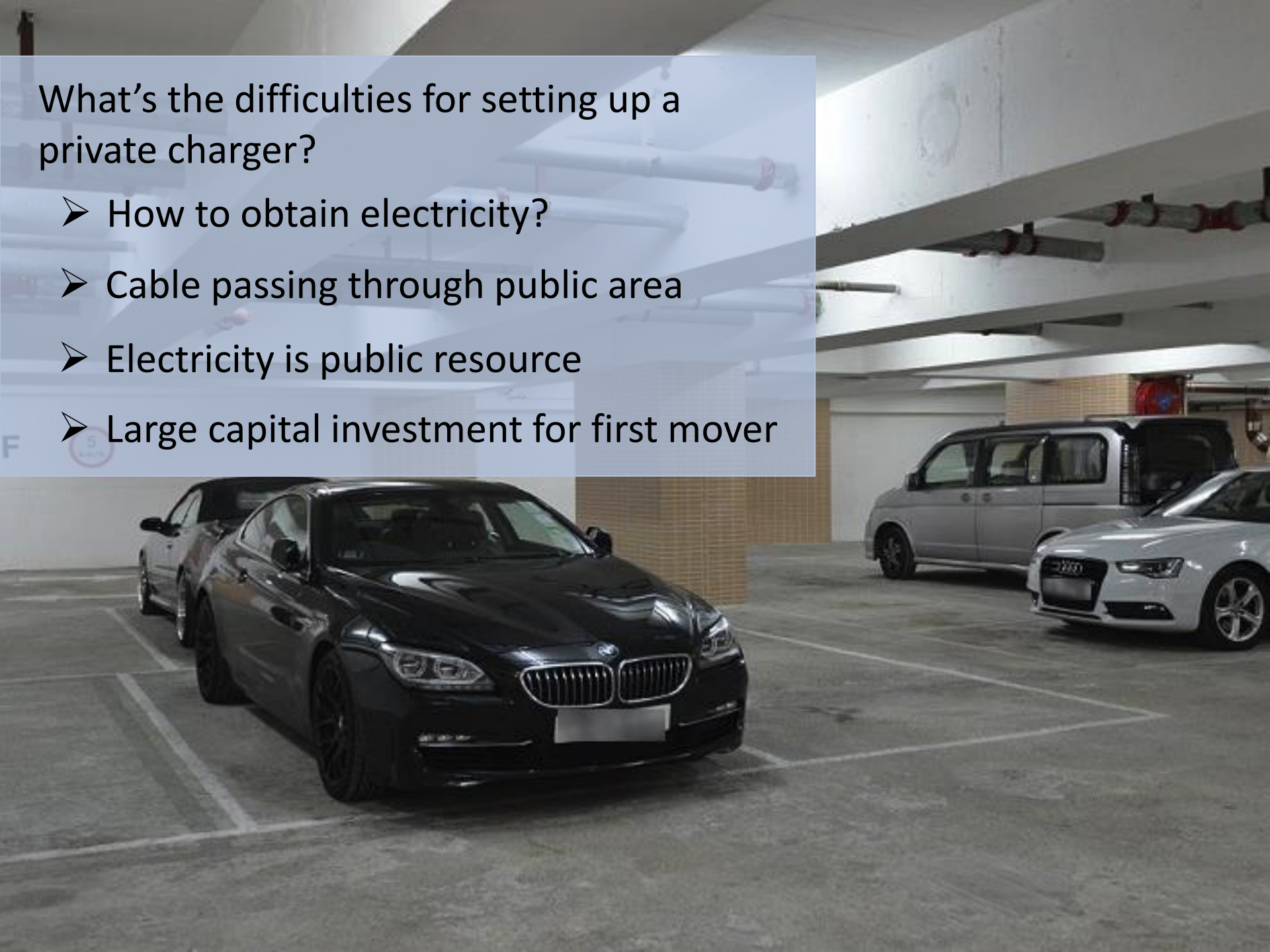




Line up and wait in public charging station

What's the difficulties for setting up a private charger?

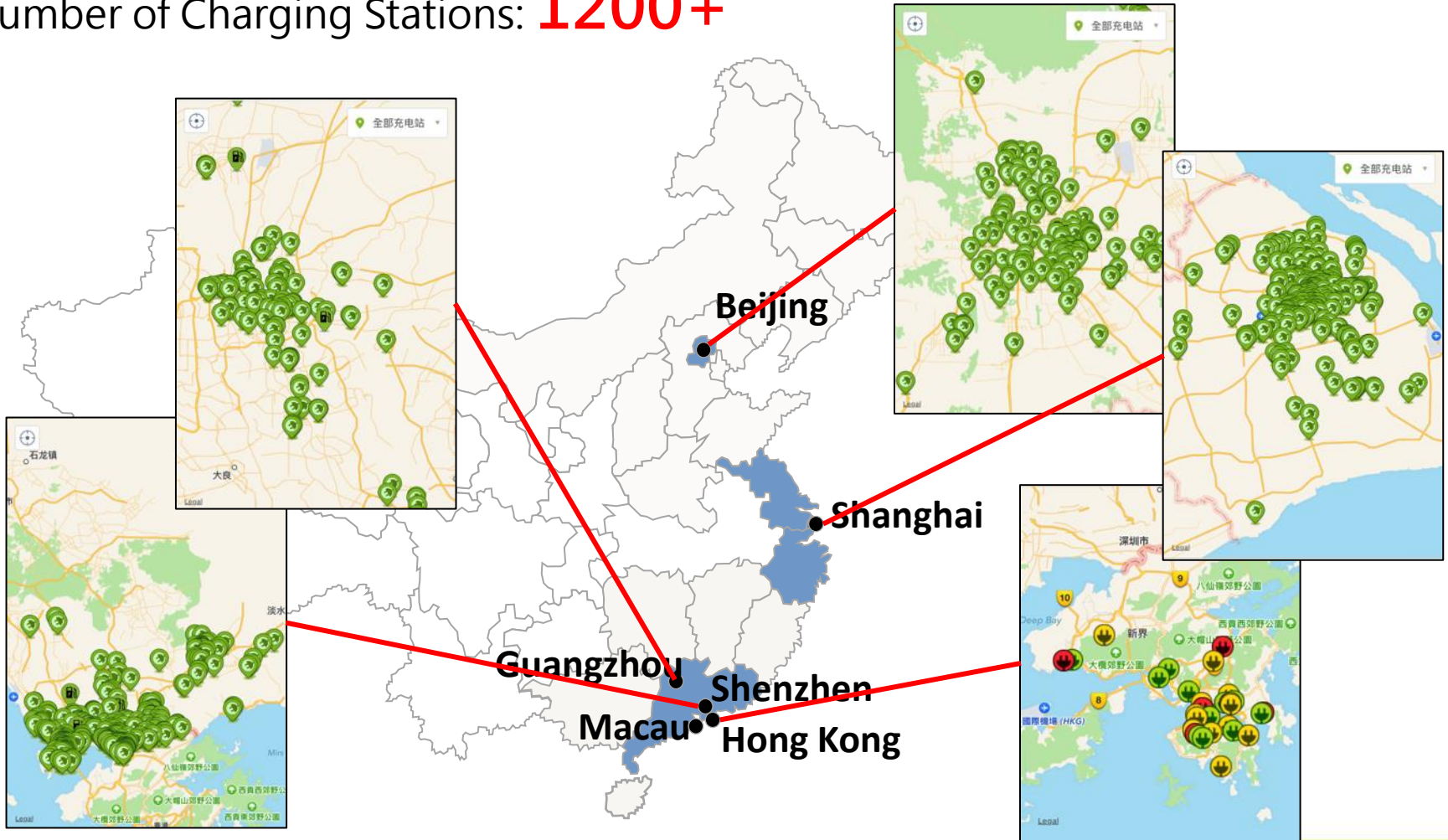
- How to obtain electricity?
- Cable passing through public area
- Electricity is public resource
- Large capital investment for first mover





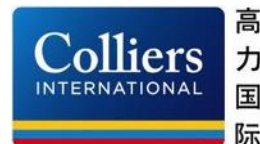
# Our Coverage

Number of Charging Stations: **1200+**

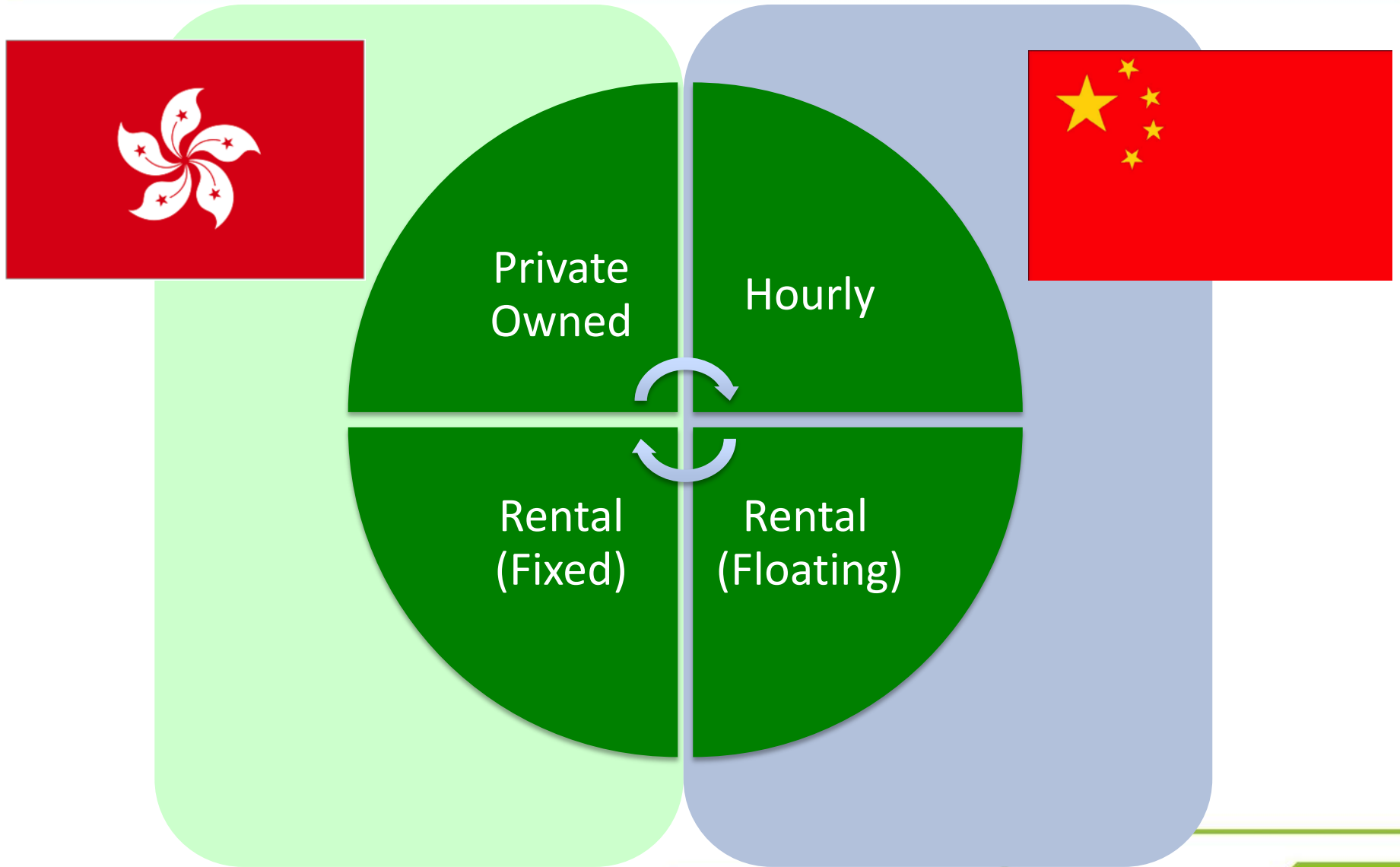




# Our Corporate Clients



# Type of Parking Lot





# Our Home Charging Solution (HK)



## Private EV Charging Service – Residential Apartment Scheme (RAS)

### *Operational Flow of RAS*

EV Power builds the infrastructure in the whole residential car park

User buys an EV and calling EV Power for service

EV Power Install the charger in the user's parking lot once receive request

User pays EV Power monthly fee according to the selected package

EV Power provides Charging service\* and maintenance service



***Tidy, safe and fair!***



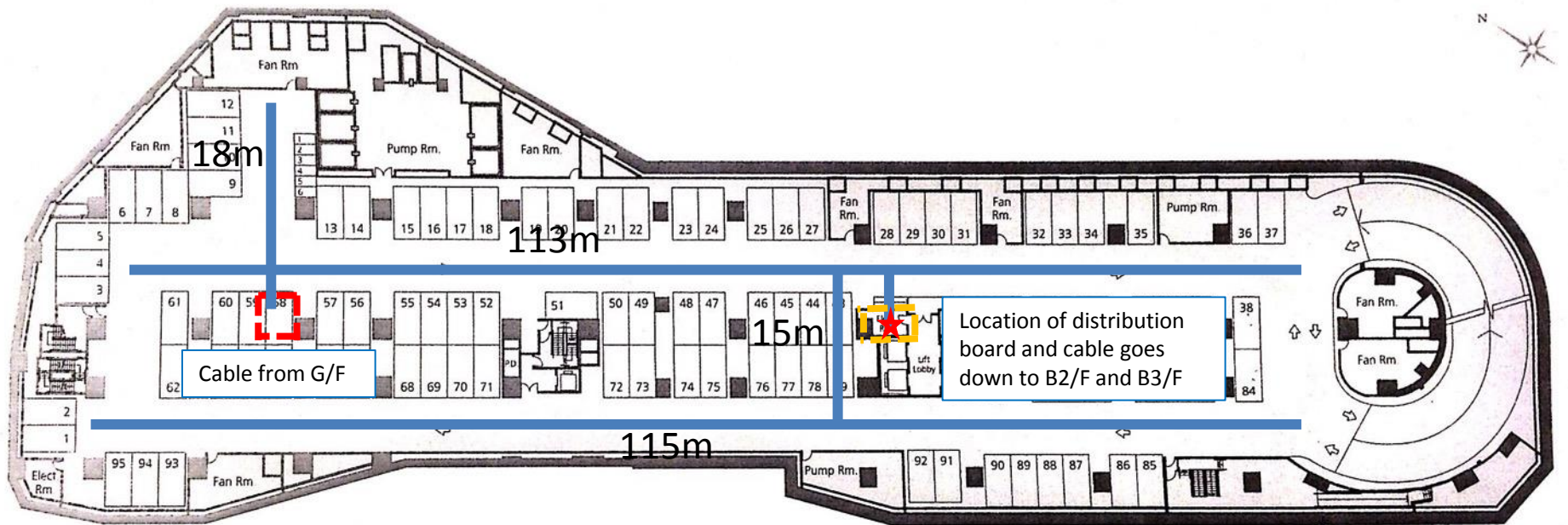
- Cable trunking system will be installed to connect the power source to vicinity of all the residential parking spaces
- All initial costs (infrastructure, installation, electricity power, maintenance) will be borne by EV Power
- Quick and simple process for EV users to enjoy charging services by paying one-off setup fee and regular monthly fees of selected package

# Our Home Charging Solution (HK)



## Private EV Charging Service – Residential Apartment Scheme (RAS)

### Infrastructure of RAS



Basement 1 地庫一層

— Cable Trunks

★ Distribution Boards & Network Devices



# Our Home Charging Solution (HK)



www.hkev.com.hk



## Private EV Charging Service - Residential Apartment Scheme

It is our honour to announce that the Private Electric Vehicle (EV) Charging Service - Residential Apartment Scheme (RAS) has been launched at your residential carpark. You can subscribe our monthly package to enjoy the easy and safe EV charging service.

	RAS (Provided by EV Power)	Install a charger by your goodself (General corporate services)
Successful application for charger installation	✓	✗ Depending on Management Office / Owners' committee approval
Installation of charger and related power cable wiring	Flat rate \$ 5,000	Generally \$20,000 - \$80,000
General installation time required (From application to installation completion)	Minimum 7 working days	2 - 3 months
Third Party Liability Insurance	✓	✗ Privately purchased
Usage statistics, real-time monitoring of charging status and SMS notification	✓	✗ May not be provided
Charging troubleshooting, Maintenance & technical supporting (including charger and related electricity wiring)	✓	✗ May not be provided

## Private EV Charging Service - Residential Apartment Scheme

Plan Code	S4	S7	E4	E7	C4	C7
Monthly Fee (HKD)	\$ 1,480	\$ 1,780	\$ 1,180	\$ 1,480	\$ 980	\$ 1,180
Plan Type	Premium		Standard			
Rated Current (Single Phase)	20A	32A	20A	32A	20A	32A
Charger Model	EVC-20N	EVC-32N	EVC-20N	EVC-32N	EVC-20N	EVC-32N
Monthly Charging Hours	Unlimited		100 hours		50 hours	
Extra Charging Service Fee (HKD)	-		\$20 per hour			
Min. Subscription Period	24 months					

The above price valid until 31/12/2016\*

### Application Notes

- The applicant must be an E-Charge member to subscribe the Private EV Charging Service - RAS ("Service Plan"). Existing E-Charge member can use the existing user account ID, otherwise please register as E-Charge member through E-Charge Account Start Pack or our website (www.hkev.com.hk).
- The applicant is required to provide a valid proof of address issued within the previous 3 months (e.g. bank statement or water/electricity/gas bills) and other related documents for verification purpose only.
- If the registered owner of parking spaces is not the applicant himself, please submit the endorsed authorization document of the owners of parking spaces for the installation of the EV charging facilities and the use of the related charging service. If the applicant fails to provide this proof, Hong Kong EV Power Limited ("Company") is entitled to reject the application or terminate the service.

### Service Plan Details

- The start date of above Service Plans must be started on the 1st day of a month. Request for the other start date, temporary charging service can be provided for the remaining part until the end of the month as follows:  
- The temporary charging service will be charged in proportion to the price as the selected Service Plan with unlimited charging hours.
- The start date of charging service will normally be about 14 days after receiving the completed application form together with all required documents, security deposit and payments.
- \$4,500HKD security deposit is required for all Service Plans. The Company shall refund any security deposit to you (after deducting any outstanding subscription fee, any loss or damage, if any, suffered by the Company in connection with your use of any Equipment) after one month of the termination of the service.
- Basic set-up fee will be charged \$5,000HKD for all Service Plans.
- Advanced payment for the first TWO months of the subscribed Service Plan is required prior to the commencement of the service provisioning.
- Each Service Plan can only apply to ONE EV, subject to the registered licence plate number of the application. The company is entitled to terminate the service immediately without prior notice if against this terms and conditions. The applicant shall indemnify the Company for all losses and liabilities arising.

**Sales Hotline : 3695 0396**

(Mon-Fri, 9am-6pm, except Saturdays, Sundays and public holidays)

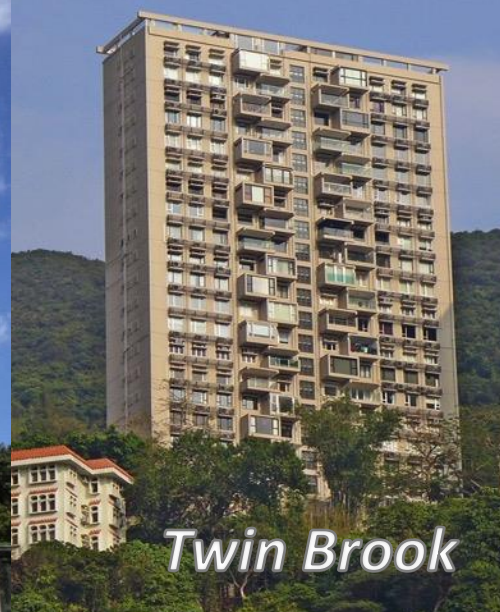
For any inquiries, please feel free to email us at [contact@hkevpower.com](mailto:contact@hkevpower.com)







*The Dahfuldy*



*Twin Brook*



*The Pacifica*



*The Portofino*



*Splendour Villa*



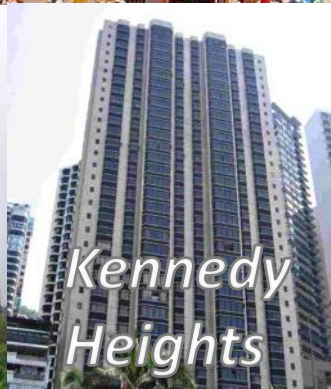
*Imperial Cullinan*



*Park Towers*



*Deerhill Bay*



*Kennedy Heights*



# Our Coverage (CHN)



# Our Coverage (CHN)

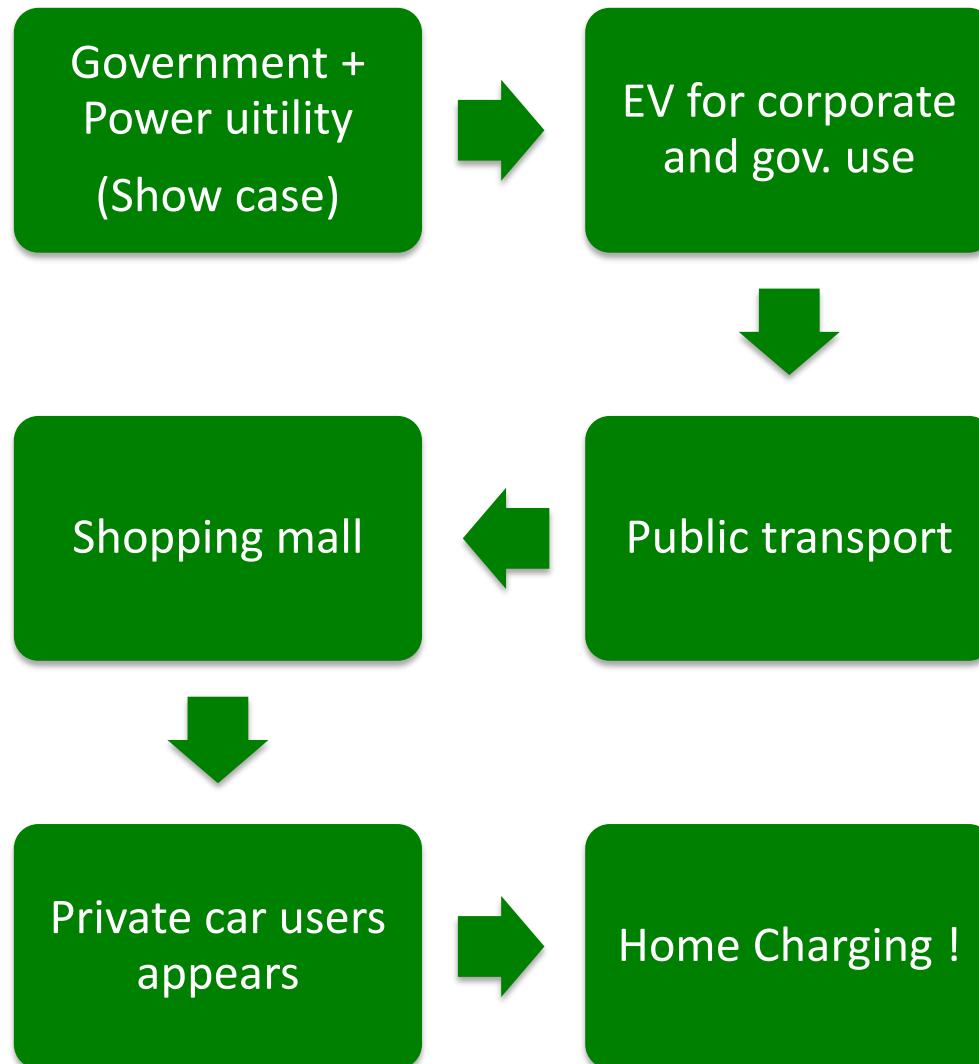




# Our Coverage (CHN)



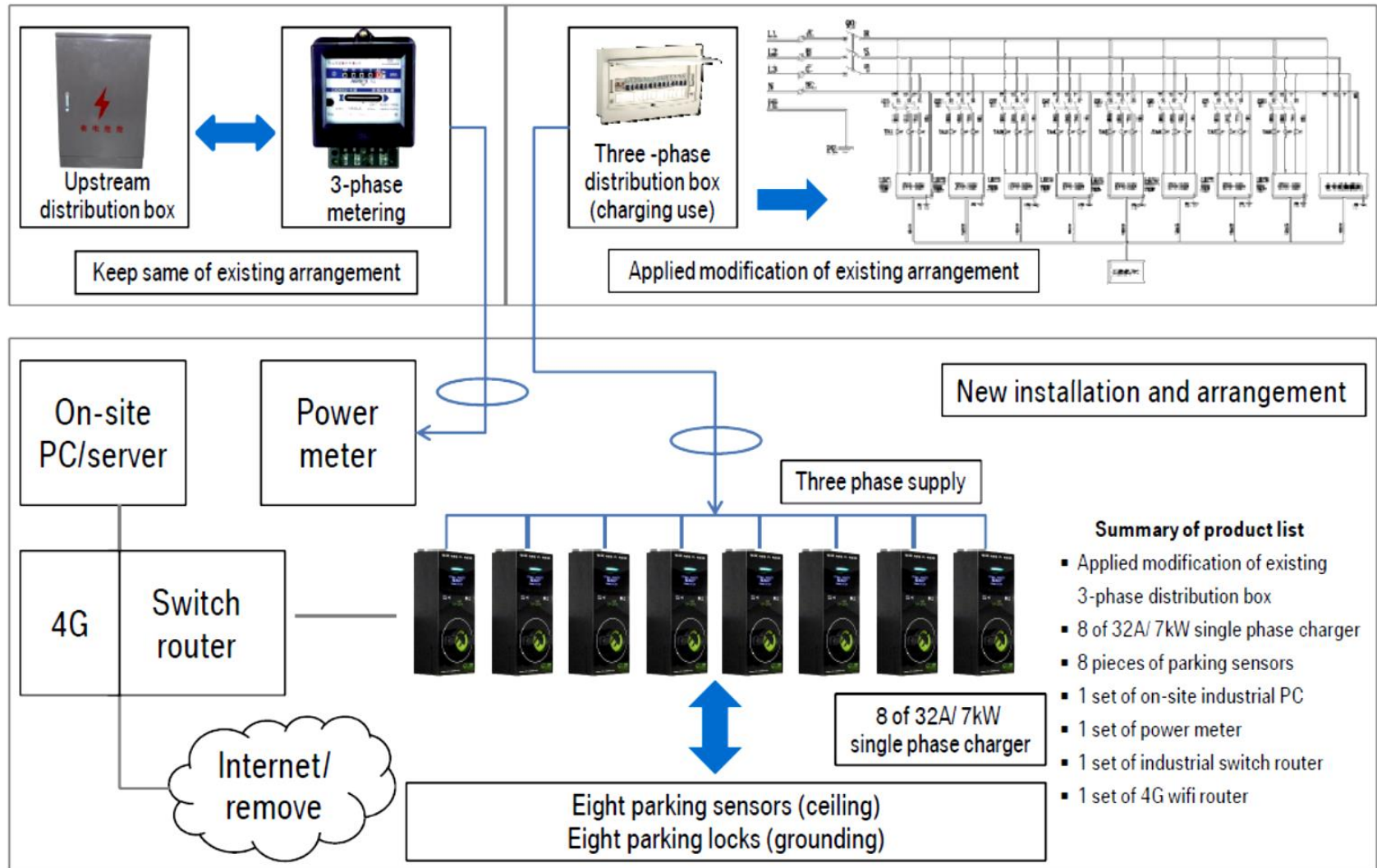
# Milestone of EV development





# Our Solutions

## Smart Charging Station (Load Management System, LMS)



# Our Solutions



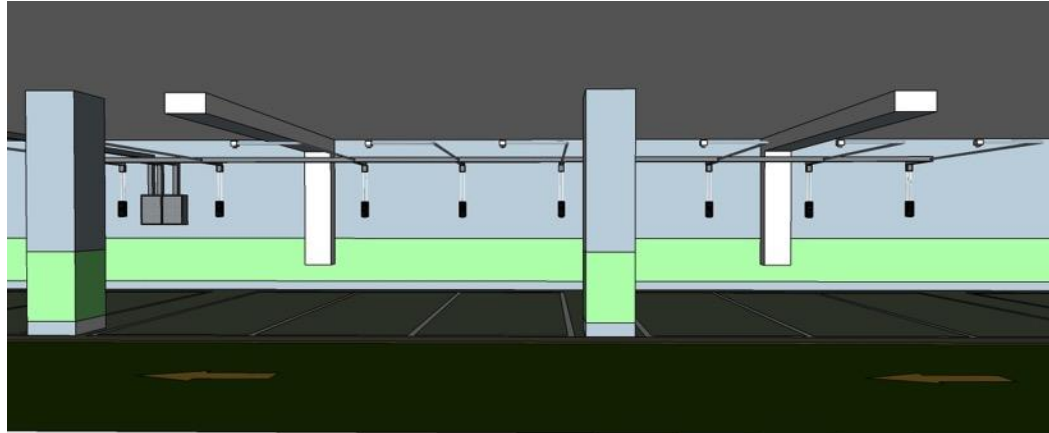
## Smart Charging Station (Load Management System, LMS)

- Project configuration including :  
charging hardware;  
IT components;  
Software;  
parking sensors;  
smart phone apps.
- 8 chargers are for three phase power supply, one phase power output for charging, which can achieve **three phase charging regulation and control**.
- Load management system is a local central system, it can monitor and **control charging load** for each charger in one charging station, by priority of:  
by current ;  
By Phase (New Feature – Automatic phase swap) ;  
By charging energy ;  
By EV charging characteristic (Depends on PWM and max. support current) ;  
By queue (If out of current).
- Parking sensor is to physically verify parking lot is occupied or not, and parking locks are acted accordingly.
- Remote access of monitor and control charging station is applied.
- Smart phone application is to search nearby charger/ charging station, and reserve E- parking lot for charging.
- Warranty and liability statement, insurance statement, etc.



# Our Solutions

## Smart Charging Station (Load Management System, LMS)



# Our Solutions

## Smart Charging Station (Load Management System, LMS)

### Software and features



### Main features summary

- Monitor parking lots status.
- EV self-test to measure charging characteristics.
- Monitor and record all charging data every second.
- Apply three phase automatic charging load management.
- Charging usage report.
- Remote control of on-site industrial PC.
- Smart phone application to search and reserve parking lot.
- Support charging network expansion in the future.
- Payment method through EV-link. (optional)



# Our Public Charging Solution



EV Power's VOLVO and BMW Designated Public Charging Stations.



# Contact Us



## **香港電動能源有限公司 Hong Kong EV Power Limited**

香港沙田科學園二期尚湖樓606室

電話: 852-3695 0396

## **上海依威能源科技有限公司 Shanghai EV Power**

上海市閘北區平型關路138號金贏108創意廣場銀座1522-23室

電話: 86-021-56982108

## **北京分公司 Beijing EV Power**

北京市朝陽區東三環中路55號的富力雙子座寫字樓B座2203室

## **廣州依威能源科技有限公司 Guangzhou EV Power**

廣州市珠江新城高德置地廣場四期2205室

## **深圳依威保華能源科技有限公司 Shenzhen EV Power**

深圳市上梅林卓越城二期603室

## **澳門EV能源有限公司 Macau EV Power**

5/F, EDF. FIT Center, 5 Andar, Macau





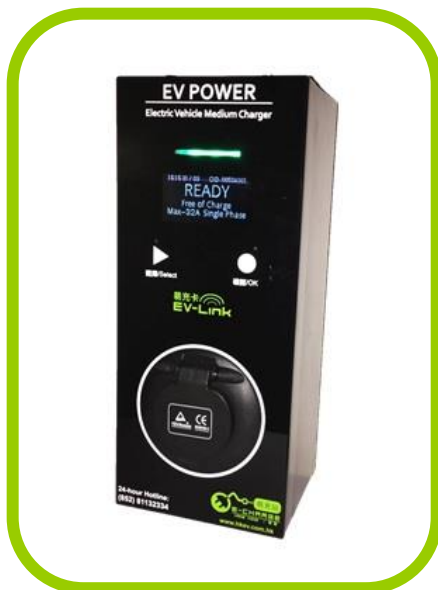


**EV POWER GROUP**  
**依威能源集團**

# Our Services



## Charging Stations



## Operation Centre



- Each EVC/EVG/EVQ charger is all-round and supports *electric charging, networking, remote monitoring & control, account management, payment gateway, etc.*
- Possessing self product development ability, EV Power is able to make and improve the charging facilities and back-office systems from time to time in order to meet the market needs and maintain the best use of the E-Charge Platforms.
- Open Platform to support other charging facilities. EV Power is able to provide instant technical support and customer services to our clients.



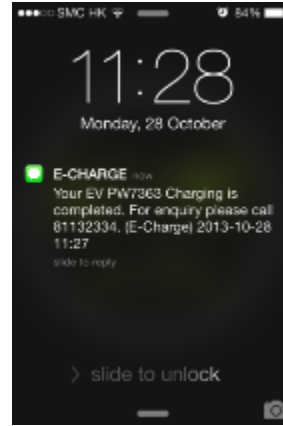
# Our Services



Charger  
Search APP



Charger  
Reservation



Messaging  
Notification



Usage Records  
& Reporting



Third-party  
Data Provision  
Service

- Every public charging point is equipped with an occupancy sensor. The EV users can reserve the charging point while the parking space and the charger are both unoccupied.
- Different payment methods are available for the users to pay the charging fees in their independent accounts. While the charging is completed normally or suspended by fault, instant messages will be sent to the users for real-time notification.
- Non-private information of the connected charging stations is integrated into E-Charge platform. Such information can be provided for any third party system to display the charger status and details.

# Our Services

即時預約服務  
Instant  
Reservation

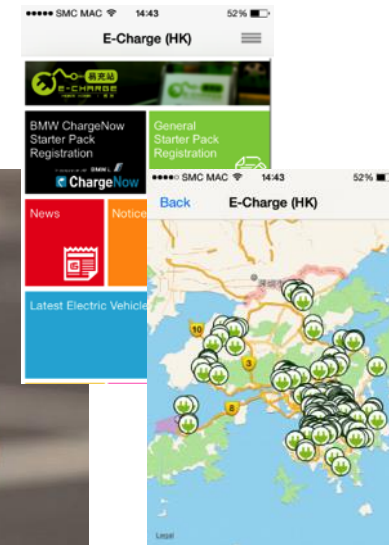
最新  
電動車資訊  
Latest EV  
Information

24小時  
監控充電過程  
24-hour  
Charging  
Monitoring

訊息提示，  
故障通知  
Error  
Notifications

查閱過往  
充電報告  
View Charging  
Report

搜尋  
充電站位置  
Locating a  
charging  
station



- E-Charge is an all-in-one online platform for both charger operators and users. It manages all chargers' daily **operation** and **payment**