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**Electrical Safety Videos** 

# www.emsd.gov.hk

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# Talking about Electrical Safety

# **Precautions with Karen Kong**

Karen urges everyone to pay attention to the precautions for electrical work inside false ceilings

Karen is a Malaysian singer-cum-actress, who made her debut in Hong Kong in 2014.



Electricity News



(к)

Karen, I know you are very busy with work. You have been in Hong Kong for some years. How are things?

Hello, I'm Karen Kong from Malaysia and have been living in Hong Kong for 13 years. In 2020, I participated in the ViuTV's reality show "King Maker III", from which people got to know me better. Recently, I have served as a mentor on TVB's "Midlife, Sing & Shine!" and helped one of the contestants break into the top seven. Besides, my single "Don't wanna move" was released last year, and I'm now preparing my first Cantonese EP in Hong Kong. Please stay tuned. Having been living in Hong Kong for these years, I got accustomed to the life here well. But I'm planning to install battens at home lately and concerned about finding a professional to ensure safety and reliability.

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Don't worry. It's a piece of cake. To facilitate the public's verification of the information of registered electrical contractors (RECs) and the authenticity, the Electrical and Mechanical Services Department has published a list of the RECs in Hong Kong on the internet. You can simply check the register online before hiring an REC to ensure peace of mind.



I see. I'll check the list of RECs in Hong Kong online quickly.



You mentioned installing battens at home just now. Do you know anything about the precautions for electrical work inside false ceilings?



(к)

I'm not sure about that. Please tell me more.

In this issue of Electricity News, there is a feature article on the precautions for electrical work inside false ceilings, along with other engaging contents. Don't miss out.

Sure, I'll read the Electricity News and share it to my friends and family.

# Feature Article 1 🕀

# Latest Updates on Application Process for Generating Facility Registration

### Background

The Feed-in Tariff (FiT) Scheme is an important initiative to promote the development of renewable energy (RE) under the current Scheme of Control Agreements signed between the Government and the two power companies. In accordance with Section 21(1) of the Electricity Ordinance (Cap. 406), the owner of a generating facility (GF) that is in use or on standby use shall register it with the Director of Electrical and Mechanical Services unless it:

- (a) is used on an aircraft;
- (b) is used on a watercraft;
- (c) is used on a hovercraft;
- (d) is on a land vehicle where the facility is not connected to a wiring installation outside the vehicle;
- (e) is used in construction work as defined and regulated under the Factories and Industrial Undertakings Ordinance (Cap. 59);
- (f) forms part of an electrical installation that requires a periodic test certificate to be submitted to the Director of Electrical and Mechanical Services under this Ordinance; or
- (g) only supplies electricity to an electrical installation that is owned by the owner of the GF.



### **Updates on Application Process for Generating Facility Registration**

The Electrical and Mechanical Services Department (EMSD) conducted tests on the automatic data transfer with the power companies in order to automate the application process as far as practicable. After the meter installation and grid connection of the GF, relevant data such as the FiT application number and commencement date of the FiT Scheme will be transferred from the power company to the EMSD automatically. Hence, the GF registration applicant no longer needs to send a copy of the "completion letter" <sup>Note1</sup> to the EMSD. The streamlined application process is depicted in Figure 1.

Under the new GF registration application process, the GF registration applicant has to submit "New Application for Registration as Generating Facilities" (i.e. "Form GF1") together with the required document for the supporting structures of GF stipulated by the relevant government departments <sup>Note2</sup> (e.g., Safety Certificate of Photovoltaic System Installed on Roof / Roof of Stairhood of New Territories Exempted House submitted to Lands Department, Acknowledgement Letter for certification on completion of relevant <u>minor works</u> issued by Buildings Department / Independent Checking Unit under the Office of the Permanent Secretary for Housing or Acknowledgement Letter for certification on completion of relevant <u>alteration and addition works</u> issued by Buildings Department / Note: The Office of the Permanent Secretary for Housing) to ensure compliance with the relevant structural safety requirements.

The above-mentioned process will be implemented on 14th June 2024.

Note1: The applicant, who participated in FiT Scheme on or before 31st December 2023, shall submit a copy of the "completion letter" in order to complete the registration.

Note2: Please consult building professionals or registered contractors under the Buildings Ordinance regarding the required document for the supporting structures of GF.





Figure 1: Application Process of GF Registration after the Implementation of Automatic Data Transfer

## **Examples of Required Document for the Supporting Structures of GF**

(1) Safety Certificate of Photovoltaic System Installed on Roof / Roof of Stairhood of New Territories Exempted House submitted to Lands Department

(2) Acknowledgement Letter for certification on completion of relevant <u>minor works</u> issued by Buildings Department / Independent Checking Unit under the Office of the Permanent Secretary for Housing

(3) Acknowledgement Letter for certification on completion of relevant <u>alteration and addition works</u> issued by Buildings Department / Independent Checking Unit under the Office of the Permanent Secretary for Housing

Table 1 Examples of Required Document for the Supporting Structures of GF

## **Renewable Energy Power System**





For further details about Renewable Energy Power System, please visit the following website or scan the QR code: https://www.youtube.com/watch?v=L8PdbVF3KVI

# | Feature Article 2 🚭

# **Precautions for Electrical Work inside False Ceilings**

### Introduction

To enhance the trade's safety awareness of work inside false ceilings, the Electrical and Mechanical Services Department (EMSD) has added Code 4G(7) to the 2020 edition of the Code of Practice for the Electricity (Wiring) Regulations (CoP), setting out safety precautions for work inside false ceilings to provide specific requirements for the trade. If electrical work on low voltage electrical installations is to be carried out inside a false ceiling, Codes 4G(7) and 4G(1) must be complied with simultaneously.



Testing whether the false ceiling is live

### **Precautions for Work inside False Ceilings**

Under Code 4G(7) of the CoP, a registered electrical contractor (REC) or the owner of the fixed electrical installation must assign a competent person to conduct a taskspecific risk assessment to identify all potential hazards associated with work inside a false ceiling before the commencement of work.

The risk assessment should at least cover the following items:

- 1: Testing whether the ceiling grid is live;
- 2: Identifying the electrical installations and circuits in the vicinity of the work area with reference to the electrical plans, and testing whether exposed conductive parts and extraneous conductive parts are live, as well as checking for any damaged cables;
- 3: Switching off the electrical installations and circuits inside the false ceiling in the work area where feasible;
- 4: Recommending workers to be provided with suitable personal protective equipment such as insulating gloves.

The REC or the owner of the fixed electrical installation should formulate appropriate method statements based on the results of the risk assessment. If the results indicate that the area in the vicinity of the work zone is live or unsafe, or if there is no suitable method statement to reduce the risk to a reasonable level, work should not be carried out in that area.



#### CODE OF PRACTICE FOR THE ELECTRICITY (WIRING) REGULATIONS



For further details about Code of Practice for the Electricity (Wiring) Regulations, please visit the following website or scan the OR code:

https://www.emsd.gov.hk/filemanager/en/content\_44 3/COP\_E\_2020.pdf

### **Electrical Work on Low Voltage Electrical Installations**

Upon completion of the above risk assessment, workers can enter the false ceiling. However, if electrical work on de-energised equipment is to be carried out inside the false ceiling, the safety precautions for work on low voltage installations as outlined in Code 4G(1) of the CoP must also be followed. Under the code, before carrying out electrical work on de-energised equipment, the electrical equipment must be isolated and verified dead with an approved voltage indicator; and a permit-to-work must be issued.



Permit-to-work (Appendix 16 of the CoP)

# News-in-brief 1

## Service Arrangements for the Registration and Permit Office

The Registration and Permit Office (RPO), located at G/F, Electrical and Mechanical Services Department (EMSD) Headquarters, 3 Kai Shing Street, Kowloon Bay, is undergoing renovation works, and the works is expected to be completed in the third quarter of 2024. From 15 April 2024 onwards, a temporary RPO has been set up in the E&M InnoFoyer on the G/F of the EMSD Headquarters, and the service hours will remain unchanged, from 9:00 am to 5:15 pm, Mondays to Fridays (closed on Saturdays, Sundays and public holidays), so as to continue to provide one-stop counter services to the public during the works. Apart from visiting the RPO in person, members of the public may submit applications for various types of registration or certificates, and make payments, by electronic means via the EMSD (Regulatory Services) Web-Based Registration Services and "iAM Smart +" mobile application with digital signature function. Upon completion of the renovation works, the RPO will be equipped with new facilities and resume services to provide the public with an enhanced service experience.





News-in-brief 2

# More E-payment Options Available including FPS and Octopus

The Electrical & Mechanical Department (EMSD) announced that the Registration and Permit Office (RPO) at its Kowloon Bay headquarters will accept payments to government fees and charges by Octopus with effect from 1 February 2024. Also, EMSD announced that Faster Payment System (FPS) payment will be available at the EMSD (Regulatory Services) Web-Based Registration Services (WBRS) with effect from 5 March 2024. In making payments, members of the public can scan the FPS QR



codes displayed at the webpages concerned using supporting mobile applications of the banks or stored value facilities.

In addition to the existing payment methods (i.e. cash, cheque, EPS, credit card and PPS), more e-payment options (FPS and Octopus) are now available. The arrangement will provide the public with more convenient and diversified payment methods.



# Joining the First Electricity and Gas Safety Forum to Raise Safety Awareness of Trade Together

The Electrical and Mechanical Services Department (EMSD) has been maintaining close communication with the trade and committed to enhancing the safety awareness of working near electrical and gas facilities, in order to promote better protection for frontline workers among the trade. On 8 November 2023, the EMSD participated in the first Electricity and Gas Safety Forum, jointly organised by the Hong Kong and China Gas Company Limited (HKCG), the CLP Power Hong Kong Limited (CLP Power) and the Hongkong Electric Company Limited (HEC), to share experience with the trade and promote the importance of good safety practices.



Mr Pang Yiu-hung, Director of Electrical and Mechanical Services, delivered the opening remarks.

The forum started with a speech given by Mr Pang Yiu-hung, Director of Electrical and Mechanical Services. In his opening remarks, Mr Pang mentioned the gradual implementation of the Gas Safety (Gas Supply) Regulations and the Electricity Supply Lines (Protection) Regulation as well as the related codes of practice since late 1990s. He also pointed out that, with the concerted effort of the trade over the years, the overall incident figures had significantly decreased since 2000. He encouraged the trade to keep pace with the times, make good use of technology, and press ahead with reforms and innovations, so as to meet the growing engineering needs while reducing incidents.



Group Photo of Mr Pang Yiu-hung, Director of Electrical and Mechanical Services (front middle), officiating guests and speakers.

Following Mr Pang's opening remarks, the forum commenced. It was divided into four sessions in which representatives from the EMSD, the HKGC, the CLP Power and the HKE delivered keynote speeches, with an emphasis on promoting safe excavation procedures and methods as well as encouraging the trade to strengthen safe practices. The EMSD introduced the Gas Safety (Gas Supply) Regulations and the Electricity Supply Lines (Protection) Regulation. Then its representative explained the four steps to a safe system of work as outlined in the relevant code of practice, namely (1) cable plan obtaining, (2) cable detection, (3) trial hole opening and (4) excavation; and encouraged the trade to adopt the concept of "four aspects of clearness", which is to ensure (1) "clear thinking", (2) "clear viewing", (3) "clear searching" and (4) "clear communication" before each action. Lastly, the EMSD analysed past incidents and shared experience from them to raise the safety awareness of the trade.



# **Code of Practice on Working near Electricity Supply Lines**



For further details of the Code of Practice on Working near Electricity Supply Lines, please visit the following website or scan the QR code: https://www.emsd.gov.hk/en/electricity\_safety/new\_edition\_cop/new\_edition\_cop\_working near esl/index.html



## Annual Technical Seminar cum 2023 Outstanding Registered Electrical Contractor Competition Prize Presentation Ceremony

In order to continuously enhance the technical standards and electrical safety awareness of the electrical trade, the Electrical and Mechanical Services Department (EMSD) has co-organised the Annual Technical Seminar (the Seminar) every year since 2001 with the Hong Kong and Kowloon Electrical Engineering & Appliances Trade Workers Union (the Union) and the Hong Kong Electrical Contractors' Association (the Association), to conduct in-depth discussions about the requirements of relevant electricity legislation with the trade, and to forge mutual learning and exchanges among practitioners.

The Seminar was held on the evening of 18 September 2023 (Monday) at the Jockey Club Auditorium of the Hong Kong Polytechnic University, with an attendance of about 700 people. Due to the influence of the COVID-19 epidemic, the Seminar had only been able to be broadcast live online since 2020. As the epidemic subsided and this year marked the 75th anniversary of the establishment of the EMSD, the Seminar this year was held physically, so that everyone could rub shoulders with each other again at this special moment.

The theme of the Seminar this year was "Pursuing Continuing Professional Development and Implementing Safety". Mr Chu Kei-ming, the then Assistant Director/Electricity and Energy Efficiency, pointed out in his opening remarks that by participating in continuing professional development (CPD) courses, registered electrical workers (REWs) could not only better equip themselves, but also continuously improve the quality of their electrical work and enhance electrical safety. He also called on all REWs to consider taking courses jointly organised by en choosing CPD courses in order to support the integration and development of cities in the Greater Bay Area.



Mr Chu Kei-ming, the then Assistant Director/Electricity and Energy Efficiency, delivered the opening remarks at the Seminar.





Mr Chu Kei-ming, the then Assistant Director/Electricity and Energy Efficiency (sixth right), Mr Chau Wing-yee, Chairman of the Union (fifth right), and Mr Tai Chi-ko, Chairman of the Association (seventh right), took a group photo with the officiating guests.

The Seminar began with Mr Lee Cheuk-ming from the Union explaining the earth fault protection requirements for moulded case circuit breakers (MCCB) after the deletion of Table 11(13) in the Code of Practice for the Electricity (Wiring) Regulations (CoP). After that, Mr Cheng Ming-fai, Electrical and Mechanical Engineer of the EMSD, talked about how CPD could help REWs maintain their professional standards and ensure that electrical works comply with legal requirements. Finally, Mr Mak Chi-kin from the Hongkong Electric Company Limited and Mr Cheung Chun-sing from the CLP Power Hong Kong Limited explained the technical and safety requirements for electric vehicle charging facilities. The Seminar attracted a lot of practitioners from the electrical trade, including REWs, professionals and representatives from academia. Participants actively expressed their opinions and asked questions, and had indepth discussions and exchanges with the speakers.



Mr Lee Cheuk-ming from the Union explained to the participants the earth fault protection requirements for MCCB after the deletion of Table 11(13) in the CoP.



Mr Cheung Chun-sing from the CLP Power Hong Kong Limited explained to participants the electricity supply to and safety considerations of electric vehicle charging facilities.



Mr Mak Chi-kin from the Hongkong Electric Company Limited explained to the participants the requirements for and common irregularities of electric vehicle charging facilities.



For more details of the Seminar and the competition, please visit the following websites or scan the QR codes:

https://www.emsd.gov.hk/en/electricity\_safety/information\_for\_the\_electrical\_trade/seminars\_for\_members\_of\_the\_electrical\_trade/18\_9\_2023\_seminar/index.html

The EMSD has been committed to promoting the development of the electrical trade and improving electrical safety standards. In 2023, in addition to organising the Seminar, the EMSD joined hands with the Union and the Association to organise the Outstanding Registered Electrical Contractors Competition again to encourage registered electrical contractors to improve the quality of their works, strengthen safety culture and set examples in order to raise professional standards. The competition was mainly divided into two stages and successfully carried out in July and August 2023, while the prizes were also awarded to the winners of the competition on the night of the Seminar.



Mr Cheng Ming-fai, Electrical and Mechanical Engineer of the EMSD, gave a lecture on the theme of "The relationship between REWs and CPD".



https://www.emsd.gov.hk/en/electricity\_safety/informatio n\_for\_the\_electrical\_trade/orecc\_2023/index.html



Ms Cheng Pui-man, the then Chief Electrical and Mechanical Engineer/Electricity Legislation (seventh left), and Mr Yee Kwong-fai, Chairperson of the adjudication panel of the Outstanding Registered Electrical Contractors Competition (sixth left), presented prizes to the winners.



# Tips for Purchasing Household Electrical Products and Gas Appliances Online

When purchasing household electrical products and gas appliances online, members of the public should pay attention to information such as product markings, specifications of power plugs, energy labels and GU marks on the product advertisements.

The product markings specify information such as the brand, model and rated voltage of an electrical product. If an electrical product used by the public is not compatible with the voltage in Hong Kong (i.e. 220 volts), the product may be damaged and the risk of electrical safety may increase. In addition, the power plugs of household electrical products shall comply with the applicable safety standards in Hong Kong. For example, 3-rectangular-pin plugs shall comply with the BS1363-1 safety standard.





The energy label provides information on the energy efficiency grade of an electrical product, with Grade 1 being the most energy efficiency gerformance of the public choose the most energy-saving product. Moreover, the energy label signifies that the energy efficiency performance of the product has been approved by the EMSD for supply in Hong Kong. Currently, eight types of products, namely room air conditioners, refrigerating appliances, compact fluorescent lamps, washing machines, dehumidifiers, televisions, storage type electric water heaters and induction cookers, irrespective of whether they are sold online or at retail stores, must bear energy labels that comply with the specific requirements for legal supply in Hong Kong. From December 2024 onwards, light-emitting diode (LED) lamps, gas cookers and gas instantaneous water heaters will also be required to comply with the above requirements. When purchasing products of the above types, members of the public should pay attention to the energy labels and choose products with higher energy efficiency to save more energy.

The GU mark signifies that a domestic gas appliance has been approved by the Gas Authority (i.e. the Director of Electrical and Mechanical Services), complies with the local requirements and has passed the quality assurance checks. When purchasing domestic gas appliances from local online platforms, members of the public should ensure that the product bears a GU mark for the sake of safety.

In conclusion, members of the public should read the product advertisements carefully when purchasing household electrical products and gas appliances online and choose products that are certified and in compliance with the statutory requirements in Hong Kong.



A sample of the GU mark





A sample of the energy label

A sample of the product markings

# Electrical Safety Videos 📘

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### 4.1 Renewable Energy Power System





For further details about the Renewable Energy Power System, please visit the following website or scan the QR code: https://www.youtube.com/watch?v=L8Pdb VF3KVI

## 4.3 Charging Facilities for EV





For further details about the Charging Facilities for EV, please visit the following website or scan the QR code:

https://www.youtube.com/watch?v=\_VBLq Q6t3\_4

#### 4.5 Requirements of RCD for New **Territories Recognized Villages**





For further details about the Requirements of RCD for New Territories Recognized Villages, please visit the following website or scan the QR code:

https://www.youtube.com/watch?v=Hg9EY 7NOh5A

### 4.2 Tips for Purchasing Household Electrical Products and Gas **Appliances Online**





For further details about the Tips for Purchasing Household Electrical Products and Gas Appliances Online, please visit the following website or scan the QR code: https://www.youtube.com/watch?v=Sl2ywV XPq3s

### 4.4 Final Circuits Using USB Outlets





For further details about the Final Circuits Using USB Outlets, please visit the following website or scan the QR code: https://www.youtube.com/watch?v=9tj9jg UN32U

# Electrical Safety Quiz

Which of the following item(s) no longer need(s) to be submitted by 3 Which of the following step(s) should be followed when working near GF registration applicants after the implementation of automatic underground electricity supply lines? data transfer? (a) Cable plan obtaining and cable detection The receipt of Form GF1 i. (b) Trial hole opening ii. A copy of the system completion letter (c) Excavation iii. The Work Completion Certificate (d) All of the above iii. A single-line schematic wiring diagram A product with which of the following plug complying with the 4 applicable safety standards in Hong Kong should the public choose □ (b) i ` ii 🗌 (a) i when purchasing household electrical products online? 🗌 (c) i 🖞 iii (d) All of the above i. A 13A plug complying with the BS1363-1 standard Which of the following item(s) should at least be included in the risk 2 ii. A 5A or 15A plug complying with the BS 546 standard assessment for work inside false ceilings? iii. A 2.5A or 5A 2-pin reversible plug complying with the IEC 61558-2-5 standard, which connects to a shaver supply i. Testing whether the ceiling grid is live 必 ※ unit in the bathroom ii. Checking for any water leaks in the ceiling и 16 iii. Recommending suitable personal protective equipment 🗌 (a) i 🗌 (b) ii 🕯 iii 2c , (c) i · iii (d) All of the above 🗌 (a) i 🗌 (b) i iii å 🗌 (c) i 🛛 iii (d) All of the above . 4d

# Readers' Feedback 🏖

We look forward to receiving your valuable feedback for continuous improvement so that the contents of Electricity News and the services of the EMSD can better meet your needs. Please complete the form below and return it to the Electricity Legislation Division of the EMSD by post, fax or e-mail (please see the contact details at the bottom of this page) on or before 30 June 2024. Thank you.

	Strongly agree	Agree	Average	Disagree	Stronly disagree
nteresting					
enefical to my present or future work					
At an appopriate level of complexity					
Enriches my knowledge					
	Strongly agree	Agree	Average	Disagree	Stronly disagree
ATISTIED WITH THE SERVICES OF THE EMSD's Electricity Legislation Division					
Other comments [1]					

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