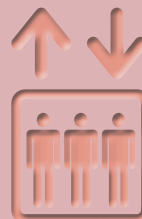




Safe Operation and Use of Amusement Rides



Measures for Enhancing Safety of Aged Lifts

Piped-Cylinder LPG Supply System



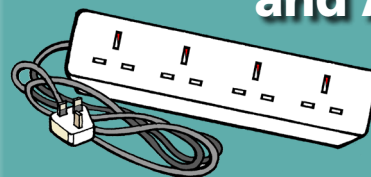
Third Phase of Mandatory Energy Efficiency Labelling Scheme Has Come into Effect



Implementation of Feed-in Tariff Scheme by Power Companies – Regulatory Requirements on Generating Facilities



Safety Tips on Extension Units and Adaptors



Safe Operation and Use of Amusement Rides

Many of you should have ridden on amusement rides on your own or with children, especially on those in theme parks or large-scale carnivals during holidays, enjoying the joyous festive atmosphere. Christmas and New Year are just around the corner. If you are planning to visit theme parks or carnivals during the holidays, you must pay attention to the operation and safe use of amusement rides to avoid accidents. Before taking a ride, you are reminded to ensure that you would do what your strength allows, pay attention to your physical health, follow the instructions of the duty operators, and take note of the following safety matters to enjoy a safe and happy ride.



- ▲ Obey the instructions from operators



- ▲ Be careful when boarding and exiting the rides



- ▲ Pay attention to your clothing and personal belongings



- ▲ Read and obey the posted rule



▲ Be in good health and sober

5

▼ Do not overload rides



6

Measures for Enhancing Safety of Aged Lifts

A lift incident happened at Block 2 of Waterside Plaza in Tsuen Wan on 8 April 2018, where a lift which has been put into service for about 27 years ascended to the top of the lift shaft before it stopped, resulting in injury of two passengers. Besides, a lift incident took place on 11 May 2018 at Paris Court of Sheung Shui Town Centre, which involved a lift that has been put into service for 26 years, resulting in fatality of one passenger. Both these incidents involved aged lifts that have not been modernised, arousing public concern about the safety of those lifts.

In view of the incidents, the Government proposed earlier short, medium and medium to long-term measures to enhance the safety of those lifts. The short-term measures were implemented on 14 July 2018, which include the following two measures:

(1) Contractors shall conduct special maintenance works at least twice every year for the important protective components (including brakes, traction machines and landing doors) of aged lifts that have yet to undergo modernisation works (i.e. those that have yet to be installed with a double brake system, an unintended car movement protection device or an ascending car overspeed protection device). Furthermore, they are required to submit to the EMSD the information about the scheduled date, time and inspection results of the special maintenance works via an online platform. The EMSD will also step up the corresponding spot checks; and

(2) Contractors shall record maintenance works in log books with an improved format to list the important protective components involved in each round of maintenance to facilitate more effective supervision of the contractors' maintenance works by the EMSD and the responsible persons for lifts.

On the medium-term measures, the Chief Executive stated in her second Policy Address delivered at the Legislative Council on 10 October 2018 that the Government plans to launch the Lift Modernisation Subsidy Scheme (LIMSS) with a provision of around \$2.5 billion by modelling on the on-going Operation Building Bright 2.0 Scheme and Fire Safety Improvement Works Subsidy Scheme. The LIMSS will target at residential or composite buildings whose rateable values do not exceed the prescribed level, with additional subsidy for elderly owner-occupiers of eligible buildings, for modernising aged lifts not meeting the latest technical standards. The Government will partner with the Urban Renewal Authority in implementing the LIMSS and hope to launch it in the first quarter of next year to assist the needy owners in expediting lift modernisation.

As for the medium to long-term measures, the Government will study the feasibility of mandating the lift modernisation works in phases. In this regard, the Government will make reference to the practices of other countries, and take into account the impact on the community and the trade.



Implementation of Feed-in Tariff Scheme by Power Companies – Regulatory Requirements on Generating Facilities

Feed-in Tariff Scheme

The new Scheme of Control Agreements (Agreements) that the Government of the Hong Kong Special Administrative Region entered into with the two power companies (i.e. CLP Power Hong Kong Limited and The Hongkong Electric Company, Limited) in April last year took/will take effect on 1 October 2018 and 1 January 2019 respectively. Under the new Agreements, the power companies will introduce a feed-in tariff scheme to encourage the development of distributed renewable energy.

By participating in the feed-in tariff scheme, private organisations can sell the power generated by their renewable energy installations (i.e. solar or wind power systems) to the power companies at a rate higher than the normal electricity tariff rate, subject to compliance with the relevant safety and technical requirements. For details of the feed-in tariff scheme, please refer to the respective announcements of the two power companies.

The EMSD has updated its website “HK RE Net” (re.emsd.gov.hk) and set up a one-stop enquiry hotline (Tel.: 6395 2930) to enhance public understanding of the information on installation of renewable energy systems and answer related questions.

Regulatory Requirements on Generating Facilities

(1) General Technical and Safety Requirements

The electrical safety matters of a renewable energy power system are regulated by the Electricity Ordinance (Cap. 406) (EO) as it is a fixed electrical installation, irrespective of whether it is connected to a power grid. Therefore, the installation must comply with the requirements of the Electricity (Wiring) Regulations (Cap. 406E) and the Code of Practice for the Electricity (Wiring) Regulations (CoP). For example, given the varied quality and sources of the products supplied on the market, registered electrical contractors and registered electrical workers, when choosing and using electrical installations (including solar photovoltaic panels,

inverters, circuit breakers and isolation switches, etc.), must comply with the requirements of Code 4 of the CoP to ensure that the installations selected are of sound quality and meet the specifications of national or international standards, and that they are purposely designed for the intended use (including use under adverse environmental conditions) so as to avoid posing fire or electrical hazards and causing damage to other equipment. Please see Figure 1 for a general diagram of the connection of a renewable energy power system to a power grid.

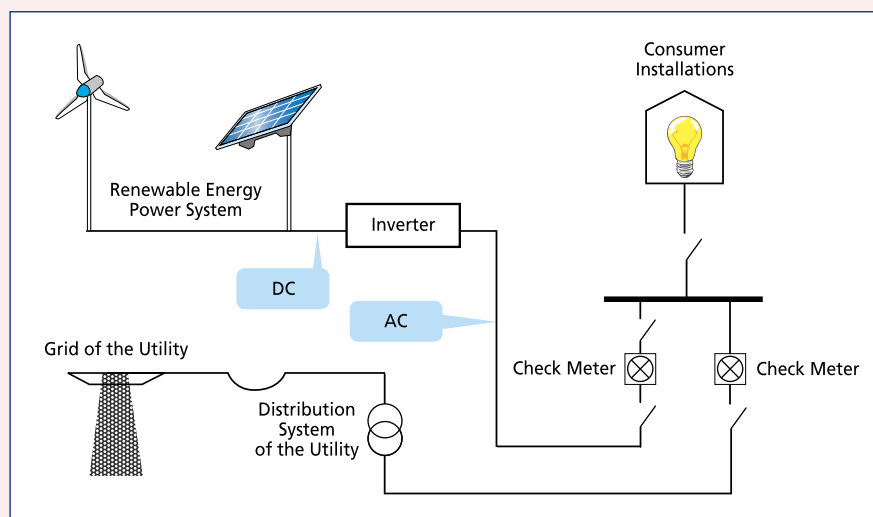
Besides, the EMSD has published the Technical Guidelines on Grid Connection of Renewable Energy Power Systems to provide details on grid connection of renewable energy power systems, which include the related safety requirements (e.g. providing an “anti-islanding” function and “dual power supply sources” warning labels, and using lockable switches and four-pole circuit breakers or isolation switches), as well as specifying that the installations must comply with the safety requirements of the EO and the CoP.

Therefore, electrical works for a renewable energy power system must be carried out by a registered electrical contractor and a registered electrical worker of appropriate grade in accordance with the EO. After completion of the works and before the installation is energised for use, the registered electrical contractor and registered electrical worker shall issue a Work Completion Certificate (i.e. Form WR1) in accordance with the Electricity (Wiring) Regulations to confirm that the installation complies with the requirements of the EO and its subsidiary regulations.

(2) Registration Requirements

Under section 21(1) of the EO, the owner of a generating facility (in use or on standby use) which produces electricity at low voltage or high voltage shall register it with the Director of Electrical and Mechanical Services (the Director) unless it:

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



▲ Figure 1: General diagram of the connection of a renewable energy power system to a power grid

▶ Figure 2: Sample of certificate of registration of a generating facility



loading of electrical installations not exceeding 100A (i.e., does not form part of an electrical installation covered under a periodic test certificate (Form WR2)) shall register the facility with the Director.

In this connection, section 14 of the Electricity (Registration) Regulations (Cap. 406D) stipulates that an owner who applies to register a generating facility shall submit to the Director an application in a form required by the Director (i.e. Form GF1), documents that the Director considers are relevant to the applicant's registration and a one-off application fee of HK\$640 specified in the Schedule of the Regulations. Once the generating facility is successfully registered, no renewal of registration will be required.

The owner of a generating facility registered with the EMSD will be issued a certificate of registration (Figure 2) which shall be displayed at the facility in accordance with section 21(3) of the EO. No person shall use an unregistered generating facility that is required to be registered under the EO. Anyone who contravenes such requirement commits an offence and is liable to a fine of HK\$10,000.

For details of application for registration as a generating facility, please refer to the website of the EMSD via the path below:

www.emsd.gov.hk → Menu → Electricity Safety → How to Apply → Registering as a Registered Generating Facility

(3) Maintenance Requirements

Under section 22 of the EO, the owner of a registered generating facility shall maintain the generating facility in continuous safe working order, and display at the facility a notice showing the name and registration number of the registered electrical contractor employed for maintaining the facility in continuous safe working order (Figure 3).

Apart from owners of registered generating facilities, the owners of the following generating facilities, for which registration is not required, shall also comply with the above two requirements under section 22 of the EO:

- (a) a generating facility which is used in construction work as defined and regulated under the Factories and Industrial Undertakings Ordinance;
- (b) a generating facility which forms part of an electrical installation that requires a periodic test certificate to be submitted to the Director under the EO; or
- (c) a generating facility which only supplies electricity to an electrical installation that is owned by the owner of the generating facility.

Maintenance Notice of Generating Facility

Name of Registered Electrical Contractor:
XX Electrical Engineering Company Limited
Registration Number: XXXXXX

▲ Figure 3: Sample of maintenance notice of a generating facility

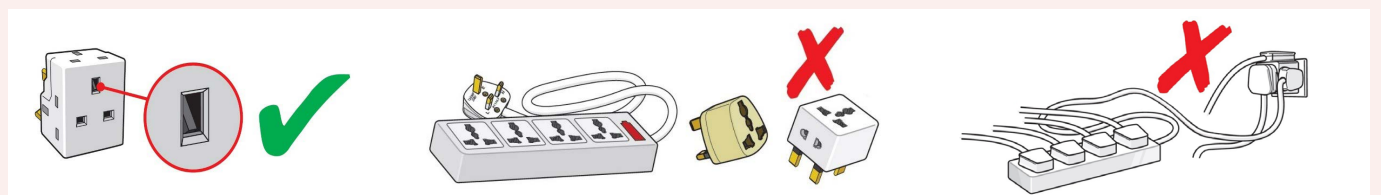
✗ Safety Tips on Extension Units and Adaptors ✓

According to the Electrical Products (Safety) Regulation, household electrical products sold in Hong Kong, including extension units and adaptors (commonly known as "universal adaptors"), must be issued with "certificates of safety compliance" to prove that they comply with the relevant international safety standards or other equivalent safety standards. Members of the public should take note of the following when purchasing and using such products:

- (1) Only purchase and use extension units and adaptors which comply with the relevant safety standards (i.e. BS1363 or BS546).
- (2) Do not use any extension unit or adaptor which is fitted with irregular socket holes or without safety shutters.
- (3) Ensure that the plugs of extension units and adaptors are firmly inserted into the socket outlet.

- (4) Do not suspend any extension unit by its flexible power cord. Otherwise, it may damage the wire connections and cause danger.
- (5) Do not plug a number of electrical appliances with high power consumption into an extension unit or adaptor.
- (6) To prevent fire caused by circuit overload, no more than one extension unit or adaptor should be inserted into a socket outlet. No adaptor should be inserted into any extension unit and vice versa.
- (7) Do not place any extension unit in a wet or humid environment, such as bathroom and kitchen.

For enquires about the safety of electrical products, please call the government hotline 1823 or e-mail to info@emsd.gov.hk.



Third Phase of Mandatory Energy Efficiency Labelling Scheme Has Come into Effect

Significant energy savings could be achieved by using more energy-efficient products, which helps reduce the emission of greenhouse gases and other air pollutants from power generation. To further promote public awareness of energy saving and the choice of energy-efficient products, the Government introduced the third phase of Mandatory Energy Efficiency Labelling Scheme (MEELS) through amendments to the Energy Efficiency (Labelling of Products) Ordinance. Such amendments had been approved by the Legislative Council and took effect on 1 June 2018. To enable the trade to make necessary preparation, there is a grace period of 18 months for the third phase of MEELS.

The third phase of MEELS covers five types of electrical appliances, namely televisions, storage type electric water heaters, induction cookers, room air conditioners for cooling and heating (covering both heating and cooling functions), and washing machines (with a rated washing capacity exceeding 7 kg but not exceeding 10 kg). The cooling function of room air conditioners for cooling and heating as well as washing machines with a rated washing capacity not exceeding 7 kg were covered in the first and second phases of MEELS respectively. After the 18-month grace period (i.e. from 1 December 2019 onwards), manufacturers or importers are required to attach energy labels in the specified format on the products before supplying them in Hong Kong. All local suppliers (including wholesalers and retailers) are not allowed to supply any prescribed product which has not been assigned a reference number and does not bear an energy label.

To provide practical guidance for the trade, the Electrical and Mechanical Services Department (EMSD) has revised the Code of Practice on Energy Labelling of Products to incorporate technical details of the new products. It is estimated that with full implementation of the third phase of MEELS, the potential annual electricity saving arising from the entire Scheme totals around 600 million kWh, which translates into an annual reduction of carbon dioxide emissions of about 420 000 tonnes.

For details of MEELS, please visit the website of "Energy Label Net" at <https://www.emsd.gov.hk/energylabel>.



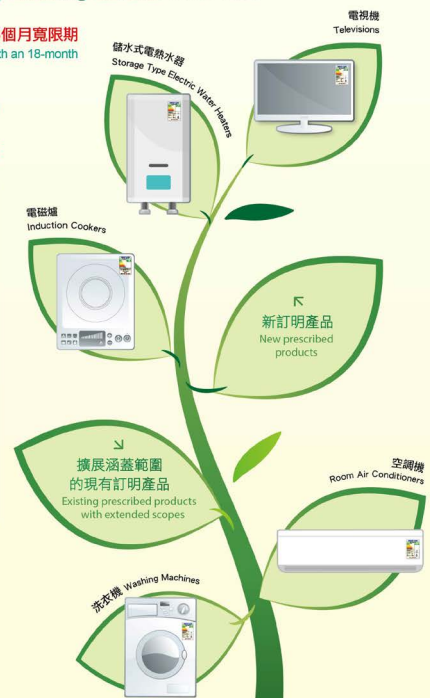
強制性能源效益標籤計劃第三階段

Mandatory Energy Efficiency Labelling Scheme Third Phase

由2018年6月1日起生效並設有18個月寬限期
The commencement date is 1 June 2018 with an 18-month grace period

在上述寬限期後所有第三階段的訂明產品
必須附有指明規格的能源標籤
All prescribed products of the third phase shall be
supplied with energy labels that comply with the specified
requirement after the above grace period

| ENERGY LABEL 能源標籤 | |
|----------------------------------|-----------|
| more efficient 效益較高 | Class 1 |
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| less efficient 效益較低 | |
| Annual Energy Consumption (kWh) | 38 |
| Annual Energy Consumption (kWh) | 106 |
| Diagonal Screen Size (cm) | 0.11 |
| Energy Efficiency Index (能源效益指數) | |
| Television | 電視機 |
| Brand | 品牌 |
| Model | 型號 |
| Reference Number / Year | 參考編號 / 年份 |
| Information Provider | 資料提供者 |
| 機電工程署 EMSD | |



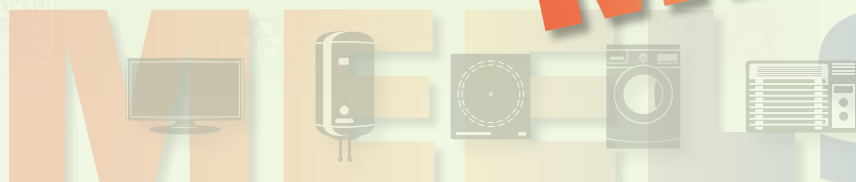
查詢 1823
For enquiries
<http://www.emsd.gov.hk/energylabel>



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機電工程署
EMSD

第三階段



第三階段

The 3rd Phase of

Piped-Cylinder LPG Supply System

In Hong Kong, the piped-cylinder LPG supply system is generally operated in the form of centralised LPG supply in supplying LPG to the cooking or hot water equipment of users. The system is mainly installed on outlying islands and in certain places with low gas consumption and no town gas supply, and the gas withdrawal can be in liquid or vapour form. The LPG storage capacity of each system usually does not exceed 1 000 kg.

Quantity of LPG Cylinders Permitted

Under no circumstances, except with the approval of the Gas Authority, i.e. Director of Electrical and Mechanical Services, is anyone allowed to store LPG cylinders (including empty cylinders) with a total nominal water capacity of over 130 litres (approximately 50 kg) in any place in accordance with the Gas Safety Ordinance. Furthermore, gas suppliers or gas distributors shall not supply LPG cylinders (including empty cylinders) exceeding the above total nominal water capacity to unauthorised LPG users.

LPG Cylinder Stores

If the storage of one or more LPG cylinders with a total nominal water capacity of over 130 litres is required, the LPG cylinders should be stored in LPG cylinder stores. Prior to constructing and using LPG cylinder stores, the construction approval and the approval of use should be obtained from the Gas Authority respectively. There are currently about 260 approved LPG cylinder stores in Hong Kong. The application forms for construction approval and approval of use of LPG cylinder stores can be downloaded from EMSD's website at <https://www.emsd.gov.hk>.

LPG cylinder stores (Figure 1) shall be located in a well-ventilated and readily accessible area at ground level to facilitate delivery of LPG cylinders and emergency services. A sterile area of at least 1 m wide, paved with concrete, shall be provided around the LPG cylinder store and should be conspicuously marked on the floor with yellow lines. Warning signs and emergency instructions in both English and Chinese shall be posted on the external wall / fence near each entrance of the store. The size of letters/characters of the warning signs, e.g. "NO SMOKING" (不准吸煙), "LPG HIGHLY FLAMMABLE" (高度易燃石油氣) and "LPG STORE" (石油氣倉), shall be of 120 mm minimum in



▲ Figure 1: An LPG cylinder store



▲ Figure 2: A change-over device



▶ Figure 3: A vaporiser

height. LPG cylinder stores shall be maintained regularly to prevent overgrown vegetation, and storage of combustible and other materials.

As LPG cylinder store is classified as a notifiable gas installation, the owner must engage a competent person to conduct regular inspection at least once every year to ensure proper maintenance and safe operation of the installation.

Piped-cylinder LPG Supply Installation

For the design of a piped-cylinder LPG supply system, a change-over device (Figure 2) will normally be installed between two banks of LPG cylinders, with the purpose of using one bank to supply gas with another one as backup so that gas supply is kept stable during replacement of LPG cylinders. If a liquid withdrawal system is adopted, a vaporiser (Figure 3) must be used to heat the LPG and turn it from liquid form to vapour form. Besides, irrespective of whether a liquid or vapour withdrawal system is used, a regulator must be installed for adjusting the pressure of LPG to an appropriate level before transferring LPG to users via a centralised pipeline.

Suspected Gas Leaks

Odorants are added to LPG, so that gas leaks can be detected easily. When users detect gas leaks, if circumstances permit, they should extinguish all naked flames and open all windows and doors wide to disperse the gas. Besides, users should avoid using telephones and operating electrical switches indoors, and should leave the scene and notify the gas supply companies or call the police as soon as possible.

E & M Safety Quiz

Please fill in the reply slip below with **the most appropriate answer** for each question and send it by post or by fax to the Editor, E&M Safety Newsletter (contact information is shown at the bottom of this page). The first 500[1] of the quiz participants answering all questions correctly will receive a souvenir (on a first-come-first-served basis).

- What should we pay attention to when taking an amusement ride?**
 - Avoid taking an amusement ride when you are not feeling well
 - Follow the instructions of the operators
 - Remove loose objects from your body
 - All of the above
- Which of the following should members of the public take note of when purchasing and using extension units and adaptors?**
 - Do not use any extension unit or adaptor which is fitted with irregular socket holes or without safety shutters.
 - No more than one extension unit or adaptor should be inserted into a socket outlet. No adaptor should be inserted into any extension unit and vice versa.
 - Do not place any extension unit in a wet or humid environment, such as bathroom and kitchen, etc.
 - All of the above.
- When will/was the third phase of MEELS (be) formally fully implemented?**
 - 1 June 2018
 - 1 January 2019
 - 1 June 2019
 - 1 December 2019
- What is the grace period for the third phase of MEELS?**
 - 13 months
 - 16 months
 - 20 months
 - 18 months
- What is the maximum rated washing capacity of washing machines covered in the third phase of MEELS?**
 - 7 kg
 - 8 kg
 - 9 kg
 - 10 kg
- Which of the following is the purpose of installing a change-over device in a piped-cylinder LPG supply system?**
 - To prevent leakage of LPG
 - To ensure stable gas supply
 - To heat the LPG and turn it from liquid form to vapour form
 - To detect gas leaks more easily

REPLY SLIP^[2]

| | | | | | |
|--------------------|----|------|----|----|----|
| Name: | | Tel: | | | |
| Hong Kong Address: | | | | | |
| Answers: | | | | | |
| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 |
| | | | | | |

[1] Only the first 500 of the quiz participants sending in the Reply Slip with all answers correct will be notified.

[2] The personal data provided in the Reply Slip will only be used for the E & M Safety Quiz purpose. It will be kept confidential and will not be disclosed to any third party. You have the right to request in writing to check whether the EMSD is keeping your personal data, to access or correct it, and to enquire about our policy and procedures in the use of such data as well as the types of personal data we are keeping. The above terms do not affect your rights as set out in the Personal Data (Privacy) Ordinance.

Answers to last issue's quiz: 1. A 2. D 3. C 4. D 5. D

Feedback

Both the English and Chinese versions of this *E&M Safety Newsletter* are available on our web page at www.emsd.gov.hk. Your enquiries and comments are most welcome. Please write to:

The Editor, E&M Safety Newsletter
Electrical and Mechanical Services Department
3 Kai Shing Street, Kowloon

Tel 電話 : 1823 (Call Centre 電話中心)

Fax 傳真 : 2576 5945

Email 電郵 : info@emsd.gov.hk

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