

Handbook for Application of Electrical Installation Licence





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Consumers using certain electrical installations are required to hold an electrical installation licence and engage a licensed electrical worker of the appropriate class to carry out regular inspection of their installations. This is to ensure that the installations are safe to use. This handbook covers the electrical installation licensing regime and the roles and responsibilities of the consumers.

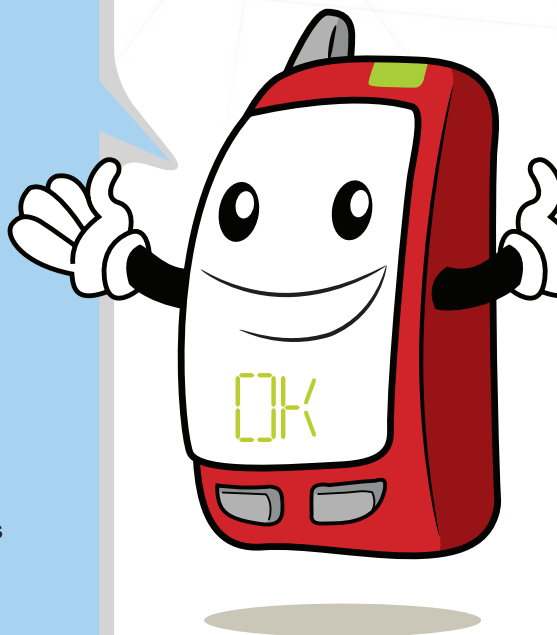
1. INTRODUCTION

- 1.1 The Energy Market Authority (EMA) is a statutory board under the Ministry of Trade and Industry. The EMA's main goals are to promote effective competition in the energy market, ensure a reliable and secure energy supply, and develop a dynamic energy sector in Singapore. Through its work, the EMA seeks to forge a progressive energy landscape for sustained growth.
- 1.2 As the regulator of the electricity industry, EMA safeguards consumer interest with regards to electrical safety. To ensure electrical safety, it is essential that electrical installations are properly maintained.
- 1.3 The licensing scheme for electrical installations was introduced in 1975 to ensure that owners/users of certain electrical installations engage a competent person, viz a licensed electrical worker¹ (LEW), to take charge of and maintain their electrical installations.
- 1.4 The licensing scheme for electrical installations is governed by the Electricity Act (Cap. 89A) and Electricity (Electrical Installations) Regulations.

¹ A licensed electrical worker is a person who is technically competent in carrying out electrical work and is licensed by EMA.

2. OBJECTIVE OF ELECTRICAL INSTALLATION LICENSING REGIME

- 2.1 The main objective of the licensing regime is to ensure that the owners/users of large electrical installations maintain their electrical installations properly and arrange for their installations to be inspected and certified fit for operation annually by LEWs.
- 2.2 Regular inspection of the electrical installation by a LEW is necessary because:
- Wirings, electrical fittings and apparatus in electrical installations degenerate with time;
 - Defects in an electrical installation, if not detected and rectified, would pose danger to life, property and the integrity of the part of the national grid to which the installation is connected;
 - Vital protection devices need to be checked to ensure their operational integrity; and
 - Equipment such as switchgear, transformers, solar PV installations, etc. need to be checked regularly in accordance with the recommendations of the equipment manufacturers.
- 2.3 Regular inspections by LEWs will ensure that potential defects are detected and rectified before they become a safety hazard.



3. WHAT IS AN ELECTRICAL INSTALLATION?

- 3.1 An electrical installation consists of electrical wirings, fittings and apparatus installed in a premises for the conveyance, control or use of electricity where the source of the electricity supply is from SP PowerAsset's electricity network.
- 3.2 A supply installation is an electrical installation owned or managed by a person where one or more generators are used as the source of electricity for the provision of electricity supply solely for his own use.

4. CLASSES OF LICENSED ELECTRICAL WORKERS

- 4.1 There are 3 classes of LEW, namely Licensed Electrician, Licensed Electrical Technician and Licensed Electrical Engineer. Only LEWs are allowed under their licence to design, install, repair, maintain, operate, inspect and test electrical and supply installations in accordance with the authorisation set out in Table 1.

Table 1

| <i>Class of LEW</i> | <i>Approved Load</i> | <i>Voltage Level</i> |
|--------------------------------|---|-------------------------------|
| Licensed Electrician | Not exceeding 45kVA | 1,000V and below |
| Licensed Electrical Technician | Not exceeding 150kVA (Design) Not exceeding 500kVA (Operation) | 1,000V and below |
| Licensed Electrical Engineer | No limit | Subject to licence conditions |





5. TYPES OF ELECTRICAL INSTALLATIONS TO BE LICENSED

- 5.1 No person shall use or operate the following types of electrical installations unless he possesses an electrical installation licence granted by EMA:
- All electrical installations used in hazardous trades²;
 - All non-domestic electrical installations with approved load³ exceeding 45kVA⁴; or
 - All supply installations for non-domestic purposes regardless of their approved load.
- 5.2 All electrical and supply installations used exclusively for domestic purposes are exempted from the electrical installation licensing requirement.
- 5.3 Tenants in a building used for non-domestic purposes who purchase electricity en bloc through their landlord/management corporation strata title (MCST), would have their respective electrical installations covered by the electrical installation licence held by the landlord/MCST unless they have opted to continue holding their electrical installation licences issued to them prior to the en bloc purchase of electricity.

² Examples of hazardous trades are businesses dealing with highly flammable or explosive materials or involved in construction work activities etc.

³ Approved load is the total electrical load that an electrical installation is designed to handle.

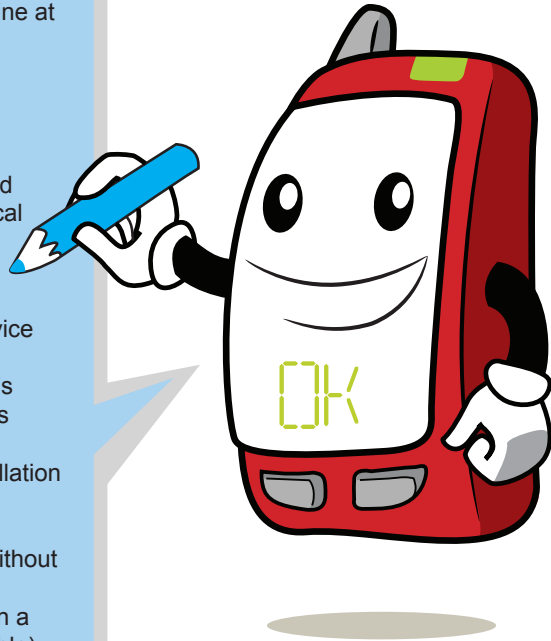
⁴ 45kVA is equivalent to 63A three-phase at 400 volts.

6. APPLICATION PROCEDURES

6.1 You have to appoint a LEW of the appropriate class to take charge of your electrical installation (which includes a supply installation where applicable). The LEW shall carry out an inspection of your electrical installation to ensure that it is safe to use or operate before submitting an application for the electrical installation licence on your behalf.

6.2 The appointed LEW⁵ will need the following information/documents to submit the licence application online at ELISE⁶:

- Letter of Appointment (LOA) (you may download the LOA at <http://elise.ema.gov.sg>);
- Valid account with SP Services Ltd for electricity supply to the electrical installation to be licensed;
- Single-line drawings⁷;
- Supporting documents⁸ for maintenance of the incoming service cable;
- A consent letter from the landlord's LEW confirming that the landlord's installation is able to support the required load of the tenant's installation (where applicable);
- Location plan of the electrical installation (for a new premises without an official address); and
- Technical details of generator(s) in a supply installation (where applicable).

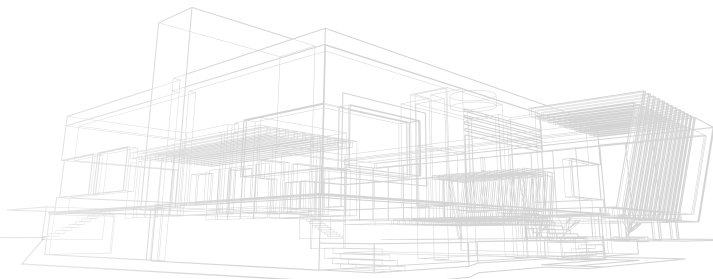


⁵ Appointed LEW is the LEW whom you have engaged to take charge of your electrical installation for the validity period of the electrical installation licence.

⁶ ELISE is an online e-services portal of EMA.

⁷ Single-line drawing is the plan showing the electrical circuits of the electrical installation. The licensee shall keep a copy of the single-line drawing at his premises.

⁸ Supporting documents to show whether the licensee (who is a tenant) or his landlord will maintain the incoming service cable to the licensee's electrical installation.



6.3 The LOA shall be signed by the applicant or his authorised person in accordance with the requirement in Table 2.

Table 2

| <i>Type of applicant</i> | <i>Requirement for signing the LOA</i> |
|---|--|
| A firm | The LOA shall be signed by a partner or manager of the firm, or a duly authorised staff of the firm in which case a letter of authorisation shall be attached with the LOA. |
| A company | The LOA shall be signed by a director, secretary or general manager of the company, or a duly authorised staff of the company in which case a letter of authorisation shall be attached with the LOA. |
| A department of the Government or statutory board | The LOA shall be signed by an officer of the Government department or the statutory board. |
| A management corporation strata title (MCST) | <p>The LOA shall be signed by the chairman or an authorised member of the MCST or a duly authorised agent of the MCST. Where the licence application is made by the authorised agent of the MCST, the authorized agent must submit a statutory declaration with the following particulars:</p> <ul style="list-style-type: none"> (i) the name, NRIC, designation and the employer (viz the company name) of the person who has been authorised by the MCST to submit and sign the application form on their behalf; (ii) the registered address of the MCST; and (iii) the name and residential address of the chairman, secretary, treasurer and members of the MCST. |

6.4 The fee structure for an installation licence is as follows:

- Electrical installation licence (12-month) - \$100
- Electrical installation licence (3-month) - \$50
- Supply installation licence (12-month) - \$150
- Supply installation licence (3-month) - \$50
- Replacement of licence - \$21.40 (inclusive of GST)

6.5 EMA will process and approve the licence application within 2-3 working days if the application is complete and in order.

6.6 The appointed LEW shall, upon receiving the approval notification from EMA, print the electrical installation licence and deliver the same to the licensee within 7 days.

6.7 The licensee shall ensure that his electrical installation licence is displayed in the immediate vicinity of the main switchboard together with a copy of the updated single-line drawing.

7. INSPECTION REQUIREMENTS

7.1 A licensed electrical installation has to be inspected and certified fit for operation by the appointed LEW at least once a year. The required frequency of inspection is set out in Table 3.



Table 3

| Type of installation | inspection Frequency | Remarks |
|--|---|--|
| Construction Worksites | At least once per month | Electrical installations at construction worksites are subjected to more wear and tear and shall be inspected at least once a month to ensure they remain safe to use. |
| Trade fairs, mini-fairs, festive lightings etc | Daily | Safety inspections should be carried out daily to ensure all parts accessible to the public remain safe and all protective devices in good working conditions. |
| Multi-tenanted buildings, condominiums etc | At least once in six months | Communal electrical services such as risers, lightings, socket-outlets, protective systems, etc should be inspected to prevent causing danger to the public. |
| High voltage ⁹ installations | Inspection and maintenance schedule shall be worked out by the appointed LEW, but inspection shall be carried out at least once a year. | The manufacturers of high voltage equipment/apparatus should be consulted on the maintenance requirements. |
| Others | Annually | Inspection shall be carried out before renewal of the electrical installation licence. |

⁹ Electrical installations taking electricity supply at the voltage level of 6.6kV and above.

- 7.2 Your appointed LEW may recommend suitable inspection frequency, maintenance schedule and any additional safety measures to be taken after assessing the operating conditions of and wear and tear to your electrical installation.
- 7.3 You need to inform your appointed LEW whenever there are modifications to the electrical installation. You may engage a different LEW to carry out the modification works. However, the LEW carrying out the modification works has to arrange with your appointed LEW to connect or disconnect the electricity supply and hand over the modification works on completion to the latter for operation and maintenance.

8. ROLES AND RESPONSIBILITIES OF THE LICENSEE

As the holder of an electrical installation licence, you shall:

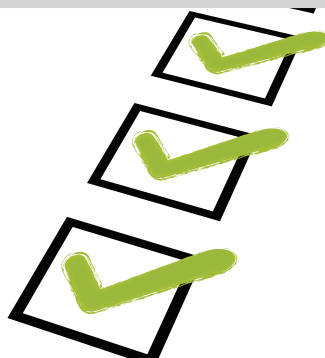
- Appoint a LEW of the appropriate class to take charge of your electrical installation;
- Ensure that your electrical installation is properly maintained as recommended by your appointed LEW;
- Inform your appointed LEW whenever any modifications of your electrical installation is to be carried out;
- Ensure that any electrical work is carried out only by a LEW;
- Keep a copy of the updated single-line drawings at your electrical installation;
- Ensure that your electrical installation is inspected by your appointed LEW at the required frequency and that you keep a copy of the inspection report; and
- Renew your electrical installation licence before the expiry date of the licence.



9. ROLES AND RESPONSIBILITIES OF YOUR APPOINTED LICENSED ELECTRICAL WORKER

Your appointed LEW is required to perform his duties as follows:

- Carry out inspection and testing of your electrical installation and certify that your electrical installation¹⁰ is safe to use or operate;
- Obtain the relevant information¹¹ for the purpose of submitting an application for an electrical installation licence;
- Submit the licence application to EMA on your behalf;
- Print and deliver the electrical installation licence to you;
- Submit inspection reports, maintenance reports, updated single-line drawings and any other relevant documents relating to your electrical installation to EMA;
- Carry out any switching operations at your electrical installation;
- Recommend servicing or maintenance work when necessary;
- Assess and approve any new connection to your electrical installation;
- Update any change of particulars of your electrical installation licence when necessary; and
- Provide advice on any technical or licensing matters related to your electrical installation.



¹⁰The entire installation starting from the origin of the installation, ie the incoming supply up to the fixed outlets or connection points, e.g lighting points, switched socket-outlets etc shall be inspected.

¹¹Please refer to item 6.2 for the relevant information required.



10. FREQUENTLY ASKED QUESTIONS

Q1. After I have issued the letter of appointment to my LEW, how do I find out the status of my licence application?

Ans. You may check the licence application status online through EMA's website at www.ema.gov.sg. You only need to enter the online reference number in this format i.e. ESXXXXXXXX.

Q2. Can the installation licence holder print the installation licence directly?

Ans: No. It is the responsibility of the appointed LEW to print and deliver the hardcopy of the electrical installation licence to the licensee.

Q3. I awarded my electrical work contract to an electrical contractor. How do I know who is my appointed LEW?

Ans: Your electrical contractor is required to appoint a LEW of the appropriate class to take charge of the electrical work. You should ask your contractor to provide you the particulars and contact information of the LEW engaged for your electrical work. You can verify the LEW's licence status from his/her card licence or via EMA website at www.ema.gov.sg.



Q4. Can I apply for the installation licence if I am not paying the electricity bill?

Ans: The owner of the installation or the entity using the installation can apply for the installation licence. The name of the licensee need not be the same as that of the utility account holder.

Q6. What do I need to do with the existing installation licence if my company changes name?

Ans: Please first ascertain if your company's Unique Entity Number (UEN¹²), has changed after changing the company name. If yes, you need to ask your appointed LEW to submit a new licence application as the installation licence is non-transferable.

If your company's UEN remains the same, you may ask your appointed LEW to update the licensee's name and apply for a replacement licence.

Q5. I occupy a unit in a multi-tenanted building for which an electrical installation licence has been issued. Can I apply for a separate electrical installation licence if I do not have an electricity account with SP Services Ltd?

Ans: No. EMA will not issue an electrical installation licence for your unit if you do not hold a separate electricity account with SP Services Ltd for the said unit.

Q7. How do I change the particulars of the installation licence?

Ans: If the changes do not involve a change in the legal entity using the electrical installation, you may ask your appointed LEW to update the particulars of the installation licence online at no cost. If you would like to have a replacement licence, your LEW would be able to apply on your behalf after updating the licence particulars. The fee payable for a replacement licence is \$21.40 inclusive of GST.

¹²UEN is the standard identification number of an entity. From 1 January 2009, all entities that are registered in Singapore, such as businesses, local companies, limited liability partnerships (LLPs), societies, representative offices, healthcare institutions and trade unions, will have a Unique Entity Number (UEN) as its identification number.

Q8. How often should I carry out maintenance on my electrical installation?

Ans: Your appointed LEW will recommend to you a suitable maintenance schedule after assessing the operating conditions, operation needs, age of the equipment/apparatus and any other relevant factors.

Q9. How do I upgrade or downgrade the approved load of my installation?

Ans: You should discuss with your appointed LEW who will assess the load requirements to meet your business operation. Your LEW will thereafter submit an application to SP Services Ltd to upgrade or downgrade the approved load of your installation.

Q10. Can I request a copy of the previously submitted single-line drawing from EMA?

Ans: The single-line drawing in EMA's record was received by EMA at the time of your licence application and could have been outdated. It would hence not be appropriate for you to obtain a copy of the single-line drawing of your electrical installation from EMA. You should approach your appointed LEW for a copy of the up-to-date single-line drawing.

Q11. How do I renew my electrical installation licence?

Ans: You have to appoint a LEW to take charge of your electrical installation. The appointed LEW will inspect your electrical installation, certify that the electrical installation is fit for operation and submit licence renewal application on your behalf to EMA via ELISE.

Q12. I am a tenant in a multi-tenanted building and all the tenants in the building have consented to purchase electricity en bloc through the landlord/MCST as a contestable consumer collectively. I have held an electrical installation licence for my tenanted unit prior to the en bloc electricity purchase. Do I need to renew my installation licence now?

Ans: In the en bloc purchase of electricity, there is only a single contestable consumer for the entire building. Consequently only one electrical installation licence is required to cover the electrical installation in the entire building.

As a transitional arrangement, the existing tenants who have possessed separate electrical installation licences prior to the en bloc purchase of electricity, would have the option to: (a) continue holding and renewing separate electrical installation licences for their respective tenanted units; or (b) arrange to have their respective tenanted units covered under the electrical installation licence of the landlord/MCST of the building.

In the latter option, you have to obtain the consent of the landlord/MCST of the building and let the appointed LEW of the landlord/MCST carry out inspection of your electrical installation.

Q13. What is a LEW?

Ans: A LEW is a person who is technically competent in carrying out electrical work and is licensed by EMA. Please refer to paragraph 4.1 for the different classes of LEW and their respective authorisation.

Q14. Why should I appoint a LEW to take charge of my installation?

Ans: This is to ensure that your electrical installation is maintained properly in compliance with the safety requirements. This requirement is set out in the Electricity Act (Cap. 89A).

Q15. What is the responsibility of the landlord's LEW in regards to the turn on of electricity supply to the tenant's electrical installation?

Ans: The landlord's LEW shall inspect the tenant's main intake switchboard to ensure that it is safe to receive electricity supply from the landlord's electrical installation. He will be responsible to energise the service cable to the tenant's main switchboard and issue the "Statement of Turn On of Electricity" to the tenant.

Q16. How much should I pay my appointed LEW for the inspection of my electrical installation and renewal of my installation licence?

Ans: EMA does not regulate the charges for the services offered by LEWs to the public as the amount of work varies from case to case and the LEWs operate in a competitive environment. You may obtain quotations from different LEWs before deciding on the appointment of your LEW.

Q17. What if my appointed LEW relinquished his duty suddenly?

Ans: You have to appoint another LEW to take charge of your electrical installation without delay as you need a competent person to operate and take charge of the installation. You need to give the newly appointed LEW the LOA to authorize him/her to submit "change of LEW" application to EMA. There is no application fee payable to EMA for such "change of LEW" application.





II. ESSENTIAL CONTACT NUMBERS

| | |
|---|---|
| Installation licence application | Energy Market Authority (EMA) Electricity Inspectorate Branch 991G Alexandra Road #01-29 Singapore 119975 Email: ema_lei@ema.gov.sg Tel: 6835 8060 Fax: 6835 8044 |
| General enquiries on utility accounts | SP Services Ltd Customer Service Email: spservices@singaporepower.com.sg Tel: 1800-222 2333 |
| Upgrading or downgrading of approved load | SP Services Ltd Supply Application Email: install@singaporepower.com.sg Tel: 6823 8283 Fax: 6823 8289 |

*For your own safety, **ALWAYS** engage a licensed electrical worker to carry out electrical work.*



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