GUIDELINES FOR THE INSTALLATION, CERTIFICATION AND INSPECTION OF ELECTRIC VEHICLE CHARGERS

1. Certification and Inspection of Electric Vehicle (EV) Chargers

1. Under the Electric Vehicles Charging Act (EVCA), EV chargers must be installed (for fixed chargers) and certified as fit for charging EVs according to requirements specified before they can be registered with LTA. During its use, EV chargers must also be periodically inspected and maintained to ensure that they are kept in good condition.

2. The installation, certification and periodic inspection of EV chargers must be carried out by qualified personnel.

1.1. Installation and Certification of EV Chargers

3. EV chargers must be installed (for fixed chargers) and certified as fit for charging EVs according to requirements under the EVCA. The Certificate of Fitness issued after the installation and certification of an EV charger will need to be provided during the subsequent registration of the charger with LTA.

4. Under the EVCA, the installation of a fixed charger must be carried out by a Licensed Electrical Worker (LEW).[1] Certification of EV chargers must be carried out by a charger equipment specialist.[2]

5. Only homologated EV charger models may be installed or certified as fit for charging EVs in Singapore. Fixed EV chargers approved for restricted access use may only be installed at a restricted access location.[3]

6. EV chargers may only be certified as fit for charging EVs if:
    a. For fixed chargers – the charger has been installed in accordance with TR 25:2022, and together with the essential apparatus and fittings required (Table 1)
    b. For non-fixed chargers – the charger satisfies the applicable safety and performance standards under the TR 25

[1] LEWs are personnel licenced by the Energy Market Authority (EMA) to carry out electrical works.

[2] LEWs and charger equipment specialists may engage assistants to assist them in carrying out the installation or certifications works, but must ensure that they supervise the assistants during the works.

[3] Refer to section 2.1 of "Guidelines on the Supply of EV Chargers".

Table 1: Apparatus and fittings required for EV chargers

Type of EV charger	Installation location	Apparatus and fittings required
Fixed EV charger	Non-restricted access	Emergency main isolation shut-off switch that complies with the following requirements: 1. An emergency main isolation shut-off switch for an EV charger must be located so that a person does not have to travel more than 15 metres from the EV charger and its associated parking lot, to reach the switch. 2. If there is more than one EV charger, one or more than one emergency main isolation shut-off switch may be shared between EV chargers within the same storey. Such switch or switches must be located so that a person does not have to travel more than 15 metres from any EV charger and its associated parking lot to reach the switch. 3. Every emergency main isolation switch for an EV charger must be located on the same storey as the EV charger, so that there is a safe means of isolating the main electrical power supply to the entire electric vehicle charging system on the same storey upon activation of any one of those switches. Those switches must be capable of being activated manually without the use of a key or tool, or any special knowledge or effort. 4. Subject to paragraph 5, the nearest edge of an emergency main isolation shut off switch must be located at least 3 metres away from an EV charger and its associated parking lot. 5. An emergency isolation shut off switch may be located less than 3 metres away from an EV charger and its associated parking lot, if there is at least another emergency main isolation shut-off switch located at least 3 metres away but within 15 metres of that EV charger and its associated parking lot. 6. An emergency main isolation shut-off switch must be located between 800 millimetres and 1.2 metres (inclusive of both measurements) above the finished floor level. 7. An emergency main isolation shut-off switch must be in a clearly visible and easily accessible location, and be clearly labelled. 8. There must be clear instructions (however indicated) on how an emergency main isolation shut-off switch may be operated.

		9. There must be one or more than one signage, on which any letter must bear a height of at least 50 millimetres and that is displayed in a prominent location from the emergency main isolation shut-off switch, directing a person on how the switch is to be operated. 10. Where an emergency main isolation shut-off switch cannot be seen clearly from, or is not within the line of sight of, an EV charger and its associated parking lot, any number of additional signages as may be necessary must be displayed for the purpose of directing persons to the emergency main isolation shut off switch.
		Apparatus and fittings required under TR 25:2022
	Restricted access	Apparatus and fittings required under TR 25:2022
Non-fixed charger	Restricted access	Apparatus and fittings required under TR 25:2022

7. Following the installation of an EV charger, the LEW must complete and endorse the applicable checklist found at LTA C&F list[4] and provide the Certificate of Fitness to the charger owner and the charger equipment specialist who is carrying out the certification of the charger.

8. Following the certification of an EV charger, the charger equipment specialist must complete and endorse the applicable checklist found at LTA C&F list and issue the Certificate of Fitness to the charger owner for the purpose of registering the charger.

9. A summary of the requirements for qualified personnel pertaining to installation and/or certification of an EV charger is at Table 2.

Table 2: Requirements for qualified personnel

Charger Type	Process	Qualified personnel	Obligations/duties under EVCA
Fixed Charger	**Installation**	**LEWs**	• Ensure only homologated EV charger model is installed • Ensure that EV chargers approved for restricted access use is only installed at a restricted access location • Install charger according to TR 25:2022 • Endorse relevant sections of the Certificate of Fitness • Cooperate with a charger equipment specialist who is carrying out certification of EV charger
	Certification	**Equipment Specialists**	• Ensure only homologated EV charger model is certified • Confirm that EV charger is installed according to TR 25:2022, and together with the essential apparatus and fittings required • Issue the Certificate of Fitness
Non- Fixed Charger	**Certification**	**Equipment Specialists**	• Ensure only homologated EV charger model is certified • Confirm that EV charger complies with the TR 25 • Issue the Certificate of Fitness

1.2. Periodic Inspection and Maintenance of EV Chargers

10. EV chargers must also be periodically inspected and maintained to ensure that they are kept in good condition. Similar to installation and certification of EV chargers,

[4] LTA's list of certificates and forms for certification, installation and inspection of EV chargers.

periodic inspection and maintenance of EV chargers must be carried out by LEWs and charger equipment specialists.[5]

11. The frequency of periodic inspections required varies depending on where the EV chargers are installed (for fixed EV chargers) and/or used. The details are in Table 3 below.

Table 3: Frequency of inspection and maintenance

Location	Qualified personnel required	Frequency required[6]
Restricted Access	Equipment specialist	Every 24 months
Non-Restricted Access	Equipment specialist	Every 6 months
	LEW	Every 12 months

12. Equipment specialists and LEWs must conduct the periodic inspection in accordance with the applicable checklists found at LTA C&F list and provide the completed and endorsed Certificate of Continued Fitness to the charger owner.

2. Certification Course for EV Charger Equipment Specialist

13. LTA and ITE have jointly developed the Certification Course for EV Charger Equipment Specialist, to ensure that equipment specialists are equipped with the necessary knowledge on regulatory requirements and standards for charger certification and inspection. It is an intermediate level course designed for personnel involved in installation, maintenance, or inspection of EV charging stations. Personnel who complete this new certification course, and pass the associated completion test, will be accredited as equipment specialists to certify and inspect EV chargers. A list of certified equipment specialists will be put up on LTA's website subsequently.

14. The 3-hour course will cover the essential aspects of EV charging standards in Singapore. Participants will gain a comprehensive understanding of the relevant regulations, test and inspection procedures, and compliance requirements. The course will also provide hands-on demonstration on charger components and theory quiz. A Certificate of Completion will be awarded to participants who complete the 3

[5] LEWs and charger equipment specialists may engage assistants to assist them in carrying out the installation or certifications works but must ensure that they supervise the assistants during the works.
[6] This refers to the frequency at which periodic inspections must be carried out, from the date on which the EV charger was certified fit for charging EVs (as indicated on the Certificate of Fitness issued by the charger equipment specialist).

hours course and pass the completion test. Basic understanding in electrical engineering and proficiency in English are required.

Course highlights	• Coverage of EV charging standards in Singapore • Practical demonstrations of test and inspection procedures • Understanding of compliance requirements • Reference to TR25 and Electric Vehicles Charging (Electric Vehicle Chargers) Regulations 2023
Fees	$85
How to register	Please email: chew_yong_hui@ite.edu.sg

3. Transitioning to the New Regulations

15. To smoothen the industry's transition, LTA will provide a grace period of 12 months, until 7 December 2024, for existing equipment specialists to complete the Certification Course for Electric Vehicle Charger Equipment Specialist. During this period, existing equipment specialists can continue to undertake certification and periodic inspection of EV chargers, as long as certification/inspection is carried out according to the requirements under the EVCA. After the grace period, only personnel who have completed the certification course and pass the associated completion test will be accredited as "charger equipment specialists" under the EVCA.

16. Should you have any further queries regarding the new regulations, please contact LTA_EV_charging@lta.gov.sg.