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## No. S 507

### ELECTRIC VEHICLES CHARGING ACT 2022

#### ELECTRIC VEHICLES CHARGING (PSA CORPORATION LIMITED — BATTERY CHARGE AND SWAP STATION TRIAL) RULES 2024

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In exercise of the powers conferred by section 28 of the Electric Vehicles Charging Act 2022, the Minister for Transport makes the following Rules:

PART 1  
PRELIMINARY

**Citation and commencement**

1. These Rules are the Electric Vehicles Charging (PSA Corporation Limited — Battery Charge and Swap Station Trial) Rules 2024 and come into operation on 11 June 2024.

**Definitions**

2. In these Rules —

“approved trial” has the meaning given by rule 3;

“calendar day” includes Saturday, Sunday and every public holiday;

“incident reporting guidelines” means the incident reporting guidelines set out in the Third Schedule;

“licensed electrical worker” means an individual who is the holder of an electrical worker licence issued under the Electricity (Electrical Workers) Regulations (Rg 1), that is valid and in force;

“prescribed competent person” means an individual prescribed under regulation 20 of the Electric Vehicles Charging (Electric Vehicle Chargers) Regulations 2023 (G.N. No. S 786/2023);

“special type of EV charger” has the meaning given by rule 2 of the Electric Vehicles Charging (Trials and Special Uses) (General) Rules 2023 (G.N. No. S 791/2023);

“specified area” means the area in Singapore delineated by the black-coloured lines in the map set out in the Second Schedule;

“specified EV charger” means any special type of EV charger that is a fixed EV charger bearing any of the part numbers listed in the First Schedule;

“specified period” means the period from 11 June 2024 to 10 June 2028 (both dates inclusive);

“specified person” means PSA Corporation Limited (UEN 199706229Z);

“swappable battery system” means a battery system that can be moved or removed from an EV charger by hand or by using a charging station or other device;

“TR25:2022” means the version of Technical Reference 25 for Electric Vehicles Charging System published by the Enterprise Singapore Board on 28 February 2022.

## PART 2

### APPROVED TRIAL

#### **Specified person to undertake approved trial**

3. The specified person is authorised by the LTA to undertake a trial in respect of the specified EV chargers at a battery charge and swap station within the specified area during the specified period (called in these Rules the approved trial).

#### **Other participants of approved trial**

4. In addition to the specified person, any person within the following classes of persons may participate in the approved trial:

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- (a) any employee, officer or agent of the specified person who is authorised by the specified person to alter, modify, certify, install, test or maintain any specified EV charger;
  - (b) any person who is engaged by, or who collaborates with, the specified person to alter, modify, certify, install, test or maintain any specified EV charger;
  - (c) any employee, officer, agent or sub-contractor of any person mentioned in paragraph (b) who is authorised by that person to carry out the activities described in that paragraph in respect of the specified EV charger;
  - (d) any employee or officer of the specified person who is authorised by the specified person to charge an electric vehicle, or who allows an electric vehicle to be charged, using any specified EV charger;
  - (e) any employee or officer of the specified person who is authorised by the specified person to charge a swappable battery system using any specified EV charger.

### **Deployment of specified EV chargers for approved trial**

5.—(1) The specified person may only install, deploy, operate and maintain any specified EV charger within the specified area during and for the purposes of the approved trial.

(2) In carrying out any of the activities described in paragraph (1) in respect of any specified EV charger, the specified person must ensure that —

- (a) the specified EV charger does not pose any hazard to, or endanger, any person or property; and
- (b) appropriate measures are taken to abate or minimise any nuisance or inconvenience caused by the installation, deployment, operation or maintenance of any specified EV charger.

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**Liability insurance**

6.—(1) The specified person must —

- (a) before the approved trial starts, have in place liability insurance insuring against any third-party liability in respect of death, bodily injury or damage to property that a person may sustain or incur arising from the approved trial; and
- (b) ensure that the liability insurance mentioned in sub-paragraph (a) is in force at all times during the approved trial.

(2) The specified person must ensure that the liability insurance is issued by an insurer who, at the time the liability insurance is issued, is lawfully carrying on an insurance business in Singapore.

(3) The LTA may impose conditions of authorisation in respect of the approved trial requiring the specified person to maintain the liability insurance mentioned in paragraph (1)(a) —

- (a) for a minimum amount of \$2 million per claim; and
- (b) under one or more approved policies, each of which —
  - (i) must not contain any limit on the number of claims that may be made in each calendar year;
  - (ii) must state that the specified person is the party solely liable to pay the premiums in respect of the liability insurance; and
  - (iii) must contain a term that the contract of the liability insurance policies may not be amended without the written consent of the LTA.

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### PART 3

#### DUTIES OF SPECIFIED PERSON

##### **Application of this Part**

7. Unless otherwise provided under this Part, the duties of the specified person under this Part apply during and for the purposes of the approved trial.

##### **Duty to operate specified EV chargers in compliance with safety and performance standards**

8. The specified person must ensure that the operation of every specified EV charger complies with any of the following applicable safety and performance standards:

- (a) the version of International Standard on Electric vehicle conductive charging system – Part 1: General requirements published by the International Electrotechnical Commission on 7 February 2017 (called IEC 61851-1:2017);
- (b) the version of International Standard on Electric vehicle conductive charging system – Part 23: DC electric vehicle charging station published by the International Electrotechnical Commission on 11 March 2014 (called IEC 61851-23:2014);
- (c) the version of International Standard on Electric vehicle conductive charging system – Part 21-2: Electric vehicle requirements for conductive connection to an AC/DC Supply - EMC requirements for off board electric vehicle charging systems published by the International Electrotechnical Commission on 18 April 2018 (called IEC 61851-21-2:2018);
- (d) the version of Singapore Standard on Code of practice for electrical installations published by Enterprise Singapore on 17 September 2018 (called SS 638:2018);
- (e) the version of Singapore Standard on Protection against lightning - All Parts published by Enterprise Singapore on 13 July 2018 (called SS 555:2018);

- (f) the version of Singapore Standard on Code of practice for earthing published by Enterprise Singapore on 23 September 2022 (called SS 551:2022).

### **Duty to have specified EV chargers periodically inspected**

9. The specified person must ensure that every specified EV charger to be deployed —

- (a) is inspected and certified by a prescribed competent person at the following frequency:
  - (i) after the end of 6 months starting on the start date of the specified period;
  - (ii) thereafter, at intervals of at least 6 months starting on the date of the last certification; and
- (b) is inspected annually by a licensed electrical worker.

### **Duty to maintain specified EV chargers**

10. The specified person must ensure that —

- (a) any specified EV charger deployed is at all times maintained in a state of good condition and in accordance with the applicable requirements set out in TR25:2022 as notified by the LTA to the specified person; and
- (b) the charging system of any specified EV charger deployed is at all times functioning properly,

such that no harm or damage is caused, or likely to be caused, to any person or property.

### **Duty to manage risks and notify incidents, etc.**

11.—(1) The specified person must, before the start of the approved trial, submit a safety proposal to the LTA that sets out the measures which the specified person intends to implement to manage and mitigate the risks of the approved trial, for the LTA's approval.

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(2) The specified person must ensure that the measures set out in the safety proposal approved by the LTA are implemented at all times during the approved trial.

(3) Where any accident, emergency or incident (called in this rule the relevant incident) occurs in the course of the specified person undertaking the approved trial that causes, or has the risk to cause, any threat to the health or safety of any person or any damage to any property or vehicle, the specified person must —

- (a) notify the LTA of the relevant incident without delay;
- (b) where the relevant incident is a type of incident specified in the incident reporting guidelines — provide to the LTA an incident report in accordance with the requirements specified in the incident reporting guidelines as applicable to that type of relevant incident —
  - (i) by email to [lta\\_electromobility@lta.gov.sg](mailto:lta_electromobility@lta.gov.sg); and
  - (ii) in Microsoft Word format or portable document format (PDF); and
- (c) comply with any additional requirements that the LTA may require, including providing to the LTA, within 14 calendar days after receiving a written request from the LTA for any clarification in relation to any incident report mentioned in sub-paragraph (b), the clarification together with any information or documents in support of that clarification.

### **Duty to provide information upon request**

12. The specified person must, upon a written request by the LTA, provide to the LTA any information relevant to the undertaking of the approved trial —

- (a) in the case of any information about any accident arising from the approved trial that has caused, or has posed a risk of, bodily injury to any individual or damage to any property or vehicle — by the date and time specified by the LTA in the written request; or
- (b) in any other case — within 14 calendar days after the date on which the specified person receives the written request.



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**Duty to seek approval to modify specified EV charger, etc.**

**13.**—(1) The specified person must obtain the LTA’s approval for —

- (a) any alteration or modification to any specified EV charger;  
or
- (b) any change in the location at which a specified EV charger is installed or deployed (as the case may be) within the specified area.

(2) An application for the LTA’s approval under paragraph (1) —

- (a) must be submitted at least 30 calendar days before the change sought to be made is to be implemented; and
- (b) must, where the change is to be made to the location at which a specified EV charger is installed or deployed, state the address of the new location within the specified area.

(3) The LTA may request the specified person to provide any other information that the LTA considers relevant to the application mentioned in paragraph (1).

**Duty to disconnect and shut down specified EV chargers on end of approved trial**

**14.** Upon the cancellation of the authorisation granted to the specified person under rule 8 or 9 of the Electric Vehicles Charging (Trials and Special Uses) (General) Rules 2023, the specified person must, within 30 calendar days after the date on which the cancellation takes effect —

- (a) disconnect every specified EV charger from the electricity grid; and
- (b) shut down the specified EV chargers.

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PART 4  
MISCELLANEOUS

**Modified application of certain Act provisions to approved trial**

**15.**—(1) During the specified period, section 25(3) applies to the inspection of a specified EV charger by a prescribed competent person under rule 9(a) as it applies to an inspection of an EV charger required by section 25, with the following modifications:

- (a) a reference to an EV charger is a reference to a specified EV charger;
- (b) a reference to the prescribed procedure and standard is a reference to the procedure and standard set out in the applicable form provided by the LTA to the specified person;
- (c) a reference to being fit for charging any electric vehicle in Singapore is a reference to being fit for charging any electric vehicle in the specified area;
- (d) a reference to a registered responsible person is a reference to the specified person;
- (e) a reference to complying with subsection (1) of section 25 is a reference to complying with rule 9.

(2) Section 25(5) applies to the failure of a prescribed competent person to comply with section 25(3) as modified by paragraph (1).

(3) During the specified period, section 31 (Tampering with EV charger, etc.) applies to a specified EV charger used in the approved trial with the modification that a reference to an EV charger is a reference to a specified EV charger.

(4) During the specified period, Division 2 of Part 5 of the Act (Product defects) applies to a specified EV charger used in the approved trial with the following modifications:

- (a) a reference to an EV charger is a reference to a specified EV charger;

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- (b) the references in sections 35(1), (2)(c), (4), (5) and (6) and 37(2)(a) to a manufacturer or supplier of an EV charger are references to the person who supplied a specified EV charger to the specified person;
  - (c) the reference in section 35(1) to the time prescribed is a reference to 7 calendar days;
  - (d) section 35(1)(b) and (c) is replaced with a reference to the specified person;
  - (e) the reference in section 35(3) to a person to whom the notice is addressed is a reference to the specified person;
  - (f) section 35(3)(b) does not apply;
  - (g) the reference in section 35(5) to the prescribed time is a reference to 14 calendar days or any longer time that the LTA may by written notice allow;
  - (h) the reference in section 36(1) to a person in section 35(1)(b) or (c) is a reference to the specified person;
  - (i) section 37(2)(b), (c) and (d) is replaced with a reference to the specified person;
  - (j) the reference in section 38(1) to the person or class of persons is a reference to the specified person;
  - (k) the reference in section 38(2) to a person is a reference to the specified person;
  - (l) section 38(3), (4), (5) and (6)(b) and (c) does not apply;
  - (m) the reference in section 39(1) to the person bound by a safety and security directive is a reference to the specified person;
  - (n) the reference in section 39(2) to a person to whom a safety and security directive is given is a reference to the specified person.
- (5) During the specified period, section 45(1) and (2)(f) applies to the specified person with the following modifications:

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- (a) a reference to the granting of a licence to any person is a reference to the granting of an authorisation to the specified person to undertake the approved trial;
- (b) a reference to the licensee is a reference to the specified person;
- (c) a reference to the validity period of the licence is a reference to the specified period;
- (d) a reference to approved policies is a reference to policies of insurance each of which is not subject to any conditions, exclusions or exceptions prohibited by these Rules;
- (e) a reference to the regulated activity authorised by the licence is a reference to the approved trial.
- (6) A reference to a section in this rule is a reference to a section of the Act.

## FIRST SCHEDULE

Rule 2

### SPECIFIED EV CHARGER PART NUMBERS

1. 1104230710106
2. 1104230710105
3. 1104230710107
4. 1104230710104
5. 1104230710108
6. 1104230710102
7. 1104230710101
8. 1104230710103



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 THIRD SCHEDULE

Rule 2

## INCIDENT REPORTING GUIDELINES

<i>First column</i>	<i>Second column</i>	<i>Third column</i>
<i>Type of relevant incident</i>	<i>Type of incident report required to be made to the LTA</i>	<i>Information required to be included in detailed incident report</i>
1. Failure of any component in any part of the battery charge and swap station resulting in the battery charge and swap station having to be shut down	<p>(a) Interim incident report within 24 hours after the relevant incident</p> <p>(b) Detailed incident report within 3 calendar days after the relevant incident</p>	<p>(a) Date, time and location of the relevant incident</p> <p>(b) Details of the component failure and the suspected reason for the failure, including any photographic or other supporting evidence</p> <p>(c) Details of damage to any property or bodily injury to any person caused by the relevant incident</p> <p>(d) Details of any corrective actions taken to prevent recurrence of the relevant incident</p>

THIRD SCHEDULE — *continued*

<i>First column</i>	<i>Second column</i>	<i>Third column</i>
<i>Type of relevant incident</i>	<i>Type of incident report required to be made to the LTA</i>	<i>Information required to be included in detailed incident report</i>
		(e) Timeline for the implementation of any rectifications to the battery charge and swap station, enhancements to safety procedures (including enhancements to the processes of installation of battery charge and swap station parts) or improvements to the operation of the battery charge and swap station
2. Overheating of or fire at the battery charge and swap station, excluding any fire caused by compromise of any battery within the battery charge and swap station	(a) Interim incident report without delay after the specified person becomes aware of the relevant incident  (b) Detailed incident report as soon as possible after the provision of the interim incident report	(a) Date, time and location of the relevant incident  (b) Details of the suspected cause of the relevant incident, including any photographic or other supporting evidence  (c) Response time in relation to the relevant incident

THIRD SCHEDULE — *continued*

<i>First column</i>	<i>Second column</i>	<i>Third column</i>
<i>Type of relevant incident</i>	<i>Type of incident report required to be made to the LTA</i>	<i>Information required to be included in detailed incident report</i>
		<p>(d) Details of damage to any property or bodily injury to any person caused by the relevant incident</p> <p>(e) Proposed enhancements to safety procedures, if any</p> <p>(f) Timeline for the implementation of any rectifications to the battery charge and swap station, enhancements to safety procedures or improvements to the operation of the battery charge and swap station</p>
3. Electrocution of a person or any electrical safety-related incident arising from the use of the battery charge and swap station	<p>(a) Interim incident report without delay after the specified person becomes aware of the relevant incident</p> <p>(b) Detailed incident report as soon as possible after the provision of the interim incident report</p>	<p>(a) Date, time and location of the relevant incident</p> <p>(b) Details of the suspected cause of the relevant incident, including any photographic or other supporting evidence</p> <p>(c) Response time in relation to the relevant incident</p>



THIRD SCHEDULE — *continued*

<i>First column</i>	<i>Second column</i>	<i>Third column</i>
<i>Type of relevant incident</i>	<i>Type of incident report required to be made to the LTA</i>	<i>Information required to be included in detailed incident report</i>
		<p>(d) Details of damage to any property or bodily injury to any person caused by the relevant incident</p> <p>(e) Proposed enhancements to safety procedures, if any</p> <p>(f) Timeline for the implementation of any rectifications to the battery charge and swap station, enhancements to safety procedures or improvements to the operation of the battery charge and swap station</p>
4. Chemical leakage of any component of the battery charge and swap station	<p>(a) Interim incident report within 3 calendar days after the specified person becomes aware of the relevant incident</p> <p>(b) Detailed incident report within 10 calendar days after the specified person becomes aware of the relevant incident</p>	<p>(a) Date, time and location of the relevant incident</p> <p>(b) Details of the relevant incident and the suspected cause of the relevant incident, including any photographic or other supporting evidence</p>

THIRD SCHEDULE — *continued*

<i>First column</i>	<i>Second column</i>	<i>Third column</i>
<i>Type of relevant incident</i>	<i>Type of incident report required to be made to the LTA</i>	<i>Information required to be included in detailed incident report</i>
		<p>(c) Details of damage to any property or bodily injury to any person caused by exposure to the chemical leakage</p> <p>(d) Details of any corrective actions taken or proposed to be taken to prevent recurrence of the relevant incident, including (where the corrective actions have already been taken) when such actions were taken</p> <p>(e) Timeline for the implementation of any corrective actions proposed to be taken to prevent recurrence of the relevant incident</p>

THIRD SCHEDULE — *continued*

<i>First column</i>	<i>Second column</i>	<i>Third column</i>
<i>Type of relevant incident</i>	<i>Type of incident report required to be made to the LTA</i>	<i>Information required to be included in detailed incident report</i>
5. Physical damage to any component of the battery charge and swap station	Detailed report within 3 calendar days after the relevant incident	<p>(a) Date, time and location of the relevant incident</p> <p>(b) Details of the relevant incident (including which component of the battery charge and swap station was damaged) and the suspected cause of the relevant incident, including any photographic or other supporting evidence</p> <p>(c) Details of damage to any property or bodily injury to any person caused by the relevant incident</p> <p>(d) Details of any corrective actions taken or proposed to be taken to prevent recurrence of the relevant incident, including (where the corrective actions have already been taken) when such actions were taken</p>

THIRD SCHEDULE — *continued*

<i>First column</i>	<i>Second column</i>	<i>Third column</i>
<i>Type of relevant incident</i>	<i>Type of incident report required to be made to the LTA</i>	<i>Information required to be included in detailed incident report</i>
		(e) Timeline for the implementation of any corrective actions proposed to be taken to prevent recurrence of the relevant incident
6. Fire caused by compromise of any battery within the battery charge and swap station	<p>(a) Interim incident report without delay after the specified person becomes aware of the relevant incident</p> <p>(b) Detailed incident report as soon as possible after the provision of the interim incident report</p>	<p>(a) Date, time and location of the relevant incident</p> <p>(b) Details of the relevant incident and the suspected cause of the relevant incident, including any photographic or other supporting evidence</p> <p>(c) Response time in relation to the relevant incident</p> <p>(d) Details of damage to any property or bodily injury to any person caused by the relevant incident</p> <p>(e) Proposed enhancements to safety procedures, if any</p>

THIRD SCHEDULE — *continued*

<i>First column</i>	<i>Second column</i>	<i>Third column</i>
<i>Type of relevant incident</i>	<i>Type of incident report required to be made to the LTA</i>	<i>Information required to be included in detailed incident report</i>
		<p>(f) Timeline for the implementation of any rectifications to the battery charge and swap station to prevent future recurrences of the relevant incident and any enhancements to safety procedures</p> <p>(g) Details of the actions taken after the relevant incident in relation to the affected battery, including any details in relation to the isolation or disposal of the battery</p> <p>(h) Details of any instances of reignition of the affected battery after the relevant incident</p>

THIRD SCHEDULE — *continued*

<i>First column</i>	<i>Second column</i>	<i>Third column</i>
<i>Type of relevant incident</i>	<i>Type of incident report required to be made to the LTA</i>	<i>Information required to be included in detailed incident report</i>
7. Damage to any electric vehicle arising from the use of the battery charge and swap station	<p>(a) Interim incident report without delay after the specified person becomes aware of the relevant incident</p> <p>(b) Detailed incident report as soon as possible after the provision of the interim incident report</p>	<p>(a) Date, time and location of the relevant incident</p> <p>(b) Details of the relevant incident and the suspected cause of the relevant incident, including any photographic or other supporting evidence</p> <p>(c) Details of damage to any property or bodily injury to any person caused by the relevant incident</p> <p>(d) Details of any corrective actions taken or proposed to be taken to prevent recurrence of the relevant incident, including (where the corrective actions have already been taken) when such actions were taken</p> <p>(e) Timeline for the implementation of any corrective actions proposed to be taken to prevent recurrence of the relevant incident</p>

Made on 7 June 2024.

LOH NGAI SENG  
*Permanent Secretary,  
Ministry of Transport,  
Singapore.*

[MOT.LT.271.0.015.0.1; AG/LEGIS/SL/89B/2020/13]

(To be presented to Parliament under section 96 of the Electric Vehicles Charging Act 2022).