

GUIDELINES FOR THE ELECTRIC VEHICLE CHARGING OPERATOR LICENSING REGIME

Contents

1. Electric Vehicle Charging Operator (EVCO) Licensing Regime.....	2
1.1. EV Charging Operator.....	2
1.2. Classification of EVCO Licence	2
1.2.1. Type of EV Chargers	2
1.2.2. EV Chargers Profile – Accessibility and Users	3
2. Application for EVCO Licence.....	3
2.1. Scope of Licence to Apply For	3
2.1.1. Information and Documents Required.....	4
2.2. Review of Licence Application.....	5
2.3. Grant of EVCO Licence	5
2.4. Licensing Conditions.....	5
2.4.1. Purchase Third Party Liability Insurance and Upload Details.....	6
2.4.2. Tagging and Untagging of EV Chargers	6
2.4.3. Data Sharing.....	7
2.4.4. Other Licensing Conditions.....	8
3. EVCO Licence Modification	9
4. EVCO Licence Renewal.....	10
5. Transitioning to the New Regulations	10
Annex A: Data to be provided by EVCOs	11
Static Records & Data	11
Dynamic Records & Data	14
Annex B: List of licensing conditions applicable to various user profiles	1718
Annex C: Cybersecurity Requirements.....	19

1. Electric Vehicle Charging Operator (EVCO) Licensing Regime

1. One of the key objectives of the Electric Vehicles Charging Act (“EVCA”) is to ensure that users have reliable access to electric vehicle (EV) charging infrastructure in Singapore. To achieve this, LTA will establish a licensing framework to regulate EV charging operators (EVCOs).

1.1. EV Charging Operator

2. Under the EVCA, anyone who operates EV charging station(s) serving members of public or provides EV charging service(s) for a fee, will be required to obtain an EVCO licence. Examples of EVCOs will include those who operate chargers serving condominium residents, office employees, other commercial building users and/or visitors of such premises. EV charging services will include the following:
 - a. Hiring out fixed chargers
 - b. Providing EV battery swapping services
 - c. Renting out non-fixed chargers
3. Chargers operated by landed homeowners to charge their households’ vehicles, or chargers operated by fleet owners to charge vehicles in their fleets do not require a licence. Operators who operate EV chargers on behalf of fleet owners or landed homeowners will still be required to obtain an EVCO licence. Operating EV charging stations or providing EV charging services without an EVCO licence constitutes an offence.

1.2. Classification of EVCO Licence

1.2.1. Type of EV Chargers

4. For the purpose of an EVCO licence, the following EV charger classifications are used:
 - a) Fixed Chargers: Non-portable EV chargers that are powered by a connection to an electrical installation, e.g., electrical grid.
 - b) Non-Fixed Chargers: Portable EV chargers that are not permanently affixed to the electrical grid.
 - c) Battery Charge and Swap Stations (BCSS): These are EV chargers that are used for charging and exchanging a depleted swappable detachable battery for a recharged swappable detachable battery.

1.2.2. User Profile

6. Apart from the classification on types of EV chargers, the licensing regime also distinguishes EV chargers based on their user profile. The user profile of an EV charger can be classified into the following 3 categories:
 - a) Publicly accessible Chargers: These are chargers that can be accessed and used by any member of the public and will typically include chargers that are installed in malls, petrol stations, or public housing carparks.
 - b) Private Chargers: These are shared chargers that can only be used by a selected group of users. Examples include chargers installed in condominiums or office premises meant only for use by condominium residents or office employees. While private chargers are not open for use by the general public, they are shared among a large number of individuals.
 - c) Single-user Chargers: These are chargers that are used exclusively by a specific user group and are not shared. Examples are chargers used exclusively by individual landed homeowners, or by fleets.

2. Application for EVCO Licence

7. Applicants may apply for an EVCO licence via the OneMotoring website which also contains a step-by-step guide. An application fee of \$1,500 will be required.
8. The online website also allows licensees to modify and renew their EVCO licence, tag the chargers that they operate (after a licence has been granted), and upload the documents required as part of the licensing conditions.

2.1. Scope of Licence to Apply For

9. When applying for an EVCO licence, operators will be required to specify the type and user profile of the EV chargers they intend to operate under the licence. For example, an applicant may opt to select a combination of fixed charger with publicly accessible and private profiles, and BCSS with a publicly accessible profile, while another applicant may opt to select fixed chargers with a publicly accessible profile only.
10. Table 1 summarises what licences can be applied for depending on the type and user profile of chargers. Conditions of licencing will be imposed on licenced EVCOs, which may differ depending on the type and user profile of EV chargers that the licensee operates.

Table 1: Classification of charging operations allowed

User Profile \ Charger Type	Publicly Accessible Chargers	Private Chargers	Single-user Chargers
Fixed chargers	✓	✓	✓
Battery Charge and Swap Stations	✓	✓	✓ (Fleet only)
Non-Fixed chargers*	Not Applicable		✓ (Restricted access locations only)

**Non-fixed chargers can only be used in bungalows, detached houses, semi-detached houses, and terrace houses that are not comprised within a strata title plan registered under the Land Titles (Strata) Act 1967*

2.1.1. Information and Documents Required

12. As part of the application process for an EVCO licence, applicants will need to provide the following information/documents:

- (i) General particulars
 - Applicants must provide general particulars such as the company's contact details and mailing address.
- (ii) Business/Company Representative
 - Applicants must provide LTA with a representative who will be authorised to act on behalf of the applicant with regard to matters pertaining to the EVCO licence, such as receiving notices served under the EVCA.
- (iii) Point-of-Contact
 - Applicants must also provide a point of contact, who is based in Singapore, for LTA to contact should the need arises, and to liaise with LTA on the service of notices and other documents required.
- (iv) ACRA business profile (if applicable)
 - Applicants must provide a copy of the full ACRA business profile search (if applicable), which can be purchased at <https://www.bizfile.gov.sg>.
- (v) Business proposal
 - Applicants must provide relevant information on their business model, such as the company structure (e.g., sole proprietorship, company, partnership), scale of business, overseas operations (if any), existing/future operation of EV chargers. To facilitate this, applicant should fill up the business proposal template found on LTA's website and provide supporting documents where relevant.

(vi) Financial documents

- Applicants must provide the company's financial statements and any other financial documents that documents the applicant's finances for the past 3 years, or from the date when the applicant commences business (if date of commencement is less than 3 years).

2.2. Review of Licence Application

13. During the review process, LTA may request for clarifications and further documentary proof to be provided. Applicants may expect a response from LTA within 6 weeks from the date of submission, to request for clarifications and/or documents to be supplemented where necessary.
14. The total processing time for the review of a licence application will vary from application to application and will depend on factors such as the completeness of documents submitted.

2.3. Grant of EVCO Licence

15. If the applicant fulfils the criteria, LTA will share a set of draft licensing conditions with the applicant via OneMotoring. This draft document is meant for the applicant's early information, so that the applicant can make the necessary preparation to ensure compliance with the conditions after the licence is granted and takes effect.
16. After a licence application is approved, the applicant must make payment of \$15,000 for the licence fee via OneMotoring, before the licence will be granted. Each EVCO licence is valid for 3 years, starting from the date of payment of the licence fees.
17. LTA will also provide the licensee with a final set of licensing conditions within a week via OneMotoring.

2.4. Licensing Conditions

18. Licensees will be required to comply with requirements and conditions of licensing imposed by LTA. Failure to comply with any licensing condition may result in regulatory action(s), such as a financial penalty or a suspension of licence.

2.4.1. Purchase Third Party Liability Insurance

19. Licensees must purchase third party liability insurance to cover the entire scope of their operations, which should come with a minimum coverage of two million Singapore Dollars per incident for an unlimited number of incidents. The insurance contract must require the insurer to inform the Authority should the licensee cancel or reduce the assured amount in the insurance.

20. **Licensees must promptly upload their insurance cover note upon the grant of a licence**, via the OneMotoring website. Licensees will only be allowed to proceed to tag their chargers via OneMotoring, after LTA has approved the insurance cover note provided.

2.4.2. Tagging and Untagging of EV Chargers

Charger Tagging

21. Before operating any EV chargers, licensees will need to tag all the chargers that they will be operating to their licence via OneMotoring. The user profile for the EV chargers to be operated will also need to be indicated. This will enable LTA to track all the chargers operated by the licensee.
22. Licensees will not be allowed to select user profiles that fall outside of the scope of the licence granted. *For example, Company A that has been granted a licence with the scope of fixed charger with publicly accessible and private profiles, will not be able to select the single-user profile for their EV chargers.*

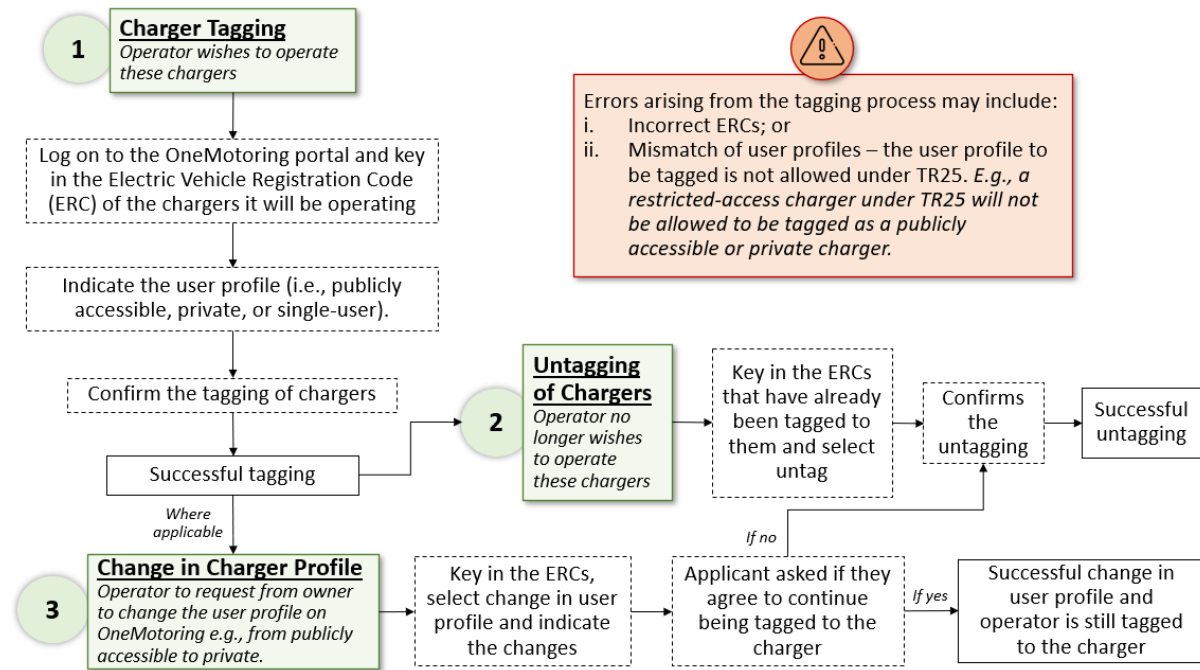
Untagging of Chargers

23. In the event a licensee is no longer operating or will no longer be operating a particular EV charger, the licensee will need to untag the EV charger.

Change in User Profile

24. The user profile of an EV charger may change depending on the preference of the charger owner or the operator. *For example, charger owner or operator may decide to change the user profile of a charger from publicly accessible to private and will be required to reflect this change on the website.*
25. Licensees will be prompted to confirm whether they wish to continue operating those chargers, which will reflect the new user profile upon confirmation. If the licensee does not wish to continue operating those chargers, the charger will be untagged.
26. Please refer to the flow chart below that maps out the workflow for the charger tagging, untagging and change in user profile.

Image 1: Flow chart for charger tagging, untagging and change in user profile



2.4.3. Data Sharing

27. All licensees will be required to submit monthly reports for **static data** in a format specified by LTA. This submission must be made by the third day of the next month and can be submitted via email at evcolicensing_enquiries@lta.gov.sg. Please refer to LTA's website for the "Static Data Submission Template" for the format of the monthly report required and **Annex A** for more information.
28. Licensees operating publicly accessible chargers are required to provide **dynamic data** in real-time via the Open Charge Point Interface protocol (OCPI) to LTA's assigned technical partner at a 2-min interval. Licensees must ensure that they are OCPI-compliant when applying for an EVCO licence and will be required to complete the OCPI integration with LTA's technical partner and begin transmission of dynamic data **within 1 month** of the grant of licence. Refer to **Annex A** for more information and the data type/format prescribed.

2.4.7. Other Licensing Conditions

28. In addition to the above, Licensees will also be required to adhere to other licensing conditions depending on the scope of licence granted, such as:
- (i) Capabilities to activate smart charging
 - The licensee shall ensure that EV chargers have the capability to adjust the electrical load in an automated way to regulate the charging rate dynamically depending on the conditions
 - (ii) Common payment method

- The licensee must provide payment methods that are commonly used across merchants in SG, such as SGQR payment codes or credit card payments, as options.

(iii) Deposits

- The licensee must not require users to maintain or provide a deposit, which refers to an unusable sum of money, before they can use an EV Charger.¹

(iv) Membership

- The licensee must not require users to have a membership account to pay for the services, i.e. must allow ad-hoc payment options.

(v) Open backend standards

- The licensee must utilise open standards for communication between the charger and the charger management system (CMS). Open standards refer to all standards that are available and accessible to all operators (e.g. ISO), and are not limited to protocols by the Open Charge Alliance.

(vi) Cybersecurity requirements

- The licensee must ensure compliance with cybersecurity requirements set out by LTA, which include the securing of network, adopting security procedures and establishing frameworks to ensure that their EV charging network is protected against cyber threats. Please refer to Annex C for the details on cybersecurity requirements.

(vii) Service uptime standards

- The licensee must maintain a service uptime of at least 90% across all their charging points at all times.²

(viii) Downtime correction standards

- The licensee must notify LTA of a charger downtime event in accordance to LTA's notification requirements. A charger downtime event refers to any event where 5% of the licensee's charger network is unoperational at the same time for more than 20 minutes, and where the downtime is directly attributable to factors within the licensee's control.

(ix) Service hotline

- The licensee must provide a service hotline to attend to the queries, feedback, or complaints from callers. The contact numbers of the service hotline must be clearly visible.

¹ The following will not be considered as deposits: (a) payments in advance through a booking system, (b) requiring payment of a monthly fee, (c) purchase of gift cards, and (d) holding a sum of money from the user while the user is charging and immediately crediting the sum of money back to the user after the charging session has ended.

² The percentage is to be calculated at the end of each calendar month and submitted in the monthly data reports.

(x) Incident management procedures

- The licensee shall provide LTA with an incident management SOP that the licensee commits to undertake when dealing with specified incidents (i.e. electrical, fire, or any other safety or security incidents resulting in any serious injury or death). In the event of such an incident, the licensee should submit an incident report to LTA based on LTA's notification requirement where applicable.

(xi) Ceasing of Operations

- The licensee shall inform the Authority, at least 6 months prior, of its intention to cease operations or if it is forced to cease operations.

(xii) Mitigation of Disamenities

- The licensee shall take all reasonable steps to ensure that disamenities specified by LTA are mitigated.

(xiii) Installation of fast chargers

- The licensee must seek LTA's approval prior to operating any fast charger (i.e. charger with power rating of 22kW and above) in any residential areas (e.g. condominiums, HDB estates, or landed homes)

(xiv) Clearance from SCDF for BCSS

- For BCSS, licensee must obtain SCDF's clearance for fire safety before installing any new BCSS

29. Please refer to **Annex B** for an overview of the licensing conditions that would apply for the respective user profiles.

3. EVCO Licence Modification

30. A modification of the licence is required if any licensee wishes to operate different types of chargers that were not approved under the original scope of the licence granted. This is necessary because licensees will be held responsible to comply with the conditions of licence originally granted by LTA, unless a modification of licence is granted.
31. Licensees can **apply for licence modification via OneMotoring up till 9 months before the date of licence expiry.** Applications for licence modification within 9 months from the date of licence expiry will not be allowed. An application fee of \$800 is required for licence modification. During the application, licensee will need to reselect the type(s) and user profile(s) for chargers that they intend to operate.
32. During the review process, LTA may request for clarifications and further documentary proof to be provided. Applicants may expect a response from LTA within 6 weeks from

the date of submission, to request for clarifications and/or documents to be supplemented where necessary.

33. The total processing time for the review of a licence application will vary from application to application and will depend on factors such as the completeness of documents submitted.

4. EVCO Licence Renewal

34. Each EVCO licence is valid for 3 years, and the licensee must renew their licence before the date of their licence expiry. An application for licence renewal will require a renewal application fee of \$1,500 and **must be made no later than 3 months before the expiry of the licence**. To ensure timely processing, licensees are advised to submit the application for licence renewal 7 months before the expiry of the licence.
35. During the review process, LTA may request for clarifications and further documentary proof to be provided. Applicants may expect a response from LTA within 6 weeks from the date of submission to request for clarifications and/or documents to be supplemented where necessary.
36. **It is the responsibility of licensees to submit their application for licence renewal in a timely manner to avoid any unintended lapse of their licence validity and any corresponding disruptions to the licensees' operations.**

6. Transitioning to the New Regulations

37. To smoothen the industry's transition, LTA will provide a grace period of 12 months, until 7 December 2024, for existing EVCOs to obtain an EVCO licence. Existing EVCOs can continue to operate EV charging stations or provide EV charging services without a licence during the grace period. After the transitional period, all EVCOs must be granted a licence before they can provide EV charging services or operate EV charging stations.
38. Should you have any further queries regarding the new regulations, please contact EVCA_licensing@lta.gov.sg.

Annex A: Data to be provided by EVCOs

As part of the Licencing Conditions, EVCOs are required to provide and retain prescribed records or data for a period of 3 years for (a) Static Records and Data and 1 year for (b) Dynamic Records and Data respectively even after the date of licence expiry.

This is relevant for the following EVCOs that holds the licence to the following:

- Fixed chargers – publicly accessible
- Fixed chargers – private
- BCSS – publicly accessible
- BCSS – private
- Non-Fixed Chargers

Static Records & Data

Licensees are required to submit monthly static records and data via the EVCO Licensing Module on One Motoring following the submission template “Static Data Submission Template” on LTA’s OneMotoring website. Additionally, they must keep the corresponding static records and data for a minimum of three years, covering each calendar month.

Electric Vehicle Charge Points
Default pricing with GST included for EV charge points of each power rating
Total number of unique registered users
Total energy transferred for EV charging for every hour in a day for each premise (i.e., carpark, etc.)
Average energy transferred of each EV charge point on an hourly basis (i.e., the average energy transferred from an EV charge point to an EV in an hour)
Utilisation rate of each non-publicly accessible EV charge point per power rating on an hourly basis (i.e., the percentage of time a charging point is used in an hour)
Network uptime of each non-publicly accessible EV charge point and average network uptime for all EV charge points
Operating Hours of all publicly accessible EV charge points

Table 1.1: Summary of data to be collected

S/N	Field Name	Data Type (In Excel)	Size (Characters)	Allow Null	Description
1.	EV Charging Operator	String	200	Not allowed	Name of EV Charging Operator
2.	Report for the Operation Month of	String	7	Not allowed	Month of report submission on operation information <Year>-<Month>

3.	Average network uptime of EV Charge Points	String	4	Not allowed	Percentage of time the EV charge points are available on a network level. E.g., 99.54%, 98.05%, 90.50%
4.	Base/Default price for the month	Float	4	Not allowed	Base/default pricing of the chargers for the month for different power rating with GST. E.g., 0.595, 0.809, etc.
5.	Power Rating	Float	4	Not allowed	Value of power rating E.g., 7.4, 120,
6.	Current Type	String	2	Not allowed	Slow or Fast Charging. E.g., AC or DC
7.	Pricing	Float	5	Not allowed	Price of EV charging service per unit of pricing E.g., 0.574
8.	Unit of Pricing	String	10	Not allowed	Unit of pricing. E.g., kWh, hour, etc.

Table 1.2: Carpark Specific

S/N	Field Name	Data Type (In Excel)	Size (Characters)	Allow Null	Description
1.	Report for the Operation Month of	String	7	Not allowed	Month of report submission on operation information <Year>-<Month>
2.	Date	String	50	Not allowed	Date of content E.g., 1 January 2024
3.	Start Time (hh:mm)	String	10	Not allowed	Start of time block for content E.g., 12:00AM
4.	End Time (hh:mm)	String	10	Not allowed	End of time block for content E.g., 12:59AM
5.	EV Charging Operator	String	200	Not allowed	Name of EV Charging Operator E.g., EVCO A
6.	Car Park Code	String	6	Not allowed	Specific carpark code for HDB/URA car parks. <Branch code><car park number>
7.	Postal Code	String	6	Not allowed	Postal code of charger installation location. E.g., 243786
8.	Total Energy Transferred (kWh)	Numeric	6	Not allowed	Accumulated energy transferred for all charge points within a carpark by a specific EVCO for that hour.

					E.g., 7kWh, 8.5kWh, etc.
9.	Average energy transferred (kWh) per charger rating	Float	6	Not allowed	Average energy transferred for all charge points within a carpark by a specific EVCO for that hour. E.g., 2kWh, 1.5kWh, etc.
10.	Average utilisation rate (%) of charge points per power rating (For non-publicly accessible charge points only)	Float	5	Not allowed	Average percentage utilisation of all charge points in a carpark by a specific EVCO for that hour. E.g., 52.45%, 68.75%, etc.
11.	ERC Number	String	11	Not allowed	Connector Code/ EV Charge point identifier provided by the EV Charger Type approval system. E.g., R12356A-001
12.	Average energy transferred (kWh)	Float	6	Not allowed	Average energy transferred of each charge point for that hour. E.g., 2kWh, 1.5kWh, etc.
13.	Utilisation rate (%) (Non-publicly accessible EVCP only)	Float	5	Not allowed	Average percentage utilisation of each EV charge point for that hour. E.g., 52.45%, 68.75%, etc.

Table 1.3: EV Charge Point (EVCP) Specific

S/N	Field Name	Data Type (In Excel)	Size (Characters)	Allow Null	Description
1.	Report for the Operation Month of	String	7	Not allowed	Month of report submission on operation information <Year>-<Month>
2.	Date	String	50	Not allowed	Date of content E.g., 1 January 2024
3.	Start Time (hh:mm)	String	10	Not allowed	Start of time block for content E.g., 12:00AM
4.	End Time (hh:mm)	String	10	Not allowed	End of time block for content E.g., 12:59AM
5.	ERC Number	String	11	Not allowed	Connector Code/ EV Charge point identifier provided by the EV Charger Type approval system. E.g., R12356A-001
6.	Average energy transferred (kWh)	Float	6	Not allowed	Average energy transferred of each charge point for that hour. E.g., 2kWh, 1.5kWh, etc.

7.	Utilisation rate (%) (Non-publicly accessible EVCP only)	Float	5	Not allowed	Average percentage utilisation of each EV charge point for that hour. E.g., 52.45%, 68.75%, etc.
----	---	-------	---	-------------	---

Table 1.4: Ad-hoc data

S/N	Field Name	Data Type (In Excel)	Size (Characters)	Allow Null	Description
1.	Report for the Operation Months of	String	50	Not allowed	Month of report submission on operation information <Year>-<Month> to <Year>-<Month>
2.	Total number of unique registered users (For EV Charge Points)	Integer	10	Not allowed	Total number of unique registered users within the reporting months.
3.	ERC Number	String	11	Not allowed	Connector Code/ EV Charge point identifier provided by the EV Charger Type approval system. E.g., R12356A-001
4.	Operating hours	String	15	Not allowed	XXXX-XXXX hours

Dynamic Records & Data

Licensees are required to integrate with LTA's Digital Platform via Open Charge Point Interface (OCPI) to send Dynamic Records and Data at a frequency of every two minutes for all publicly accessible EV charge points to LTA's appointed technical partner. Such Dynamic Records and Data should also be retained by licensees for a minimum of one calendar year.

A licensee should follow the latest official OCPI release with version 2.2.1 as baseline to minimally provide the required information listed below.

Dynamic Data	Description and Example		
Operator	[OCPI 2.2.1 Section 8.3.1] Location		
	Property	Type	Description
	operator	Business Details	Information of the operator.
	[OCPI 2.2.1 Section 8.4.2] Business Details		
	Property	Type	Description
	name	String	Name of the operator
Name of Operator, same as the name used for EVCO licencing registration.			

	E.g., Operator A		
Charging station/location name	[OCPI 2.2.1 Section 8.3.1] Location		
	Property	Type	Description
	name	String	Display name of the location
	E.g., Delta Sports Complex, MSCP 123		
EV Charge Point ID / ERC Number	[OCPI 2.2.1 Section 8.3.3] Connector		
	Property	Type	Description
	id	String	Identifier of the Connector within the EVSE.
	The identification details of each charging point (“the Charge Point ID”) generated from charger registration on OneMotoring. E.g., R100001F-001		
Price (With GST)	[OCPI 2.2.1 Section 8.3.3] Connector		
	Property	Type	Description
	Tariff_ids	CiString	Identifiers of the currently valid charging tariffs.
	[OCPI 2.2.1 Section 11.3.1] Tariff		
	Property	Type	Description
	id	CiString	Uniquely identifies the tariff within the CPO’s platform.
	elements	TariffElement	List of Tariff Elements
	[OCPI 2.2.1 Section 11.4.4] TariffElement		
	Property	Type	Description
	price_components	PriceComponent	List of price components that describe the pricing of a tariff
	[OCPI 2.2.1 Section 11.4.2] PriceComponent		
	Property	Type	Description
	type	TariffDimensionType	Type of tariff dimension
	price	number	Price per unit (excl. VAT) for this tariff dimension.
	vat	number	Applicable VAT percentage for this tariff dimension. If omitted, no VAT is applicable. Not providing a VAT is different from 0% VAT, which would be a value of 0.0 here.
	step_size	int	Minimum amount to be billed. This unit will be billed in this step_size blocks. Amounts that are less than this step_size are rounded up to the given step_size. For example: if type is TIME and step_size has a

			value of 300, then time will be billed in blocks of 5 minutes. If 6 minutes were used, 10 minutes (2 blocks of step_size) will be billed.
	Price charged by the licensee for the provision of EV charging services to 3 decimal points. E.g., 0.500, 0.655, 0.812		
Price Type	[OCPI 2.2.1 Section 11.4.5] TariffDimensionType		
	Property	Description	
	ENERGY	Defined in kWh, step_size multiplier: 1Wh	
	FLAT	Flat fee without unit for step_size	
	PARKING_TIME	Time not charging: defined in hours, step_size multiplier: 1 second	
	TIME	Time charging: defined in hours, step_size multiplier: 1 second	
	Price type (i.e., whether price is measured by amount of energy transferred (kWh) or amount of time taken to deliver the energy (hour)). “kWh, hour”		
Status (Availability)	[OCPI 2.2.1 Section 8.3.22] Status of an EVSE		
	Value (in capital letters)	Description	
	AVAILABLE	The EVSE/Connector is able to start a new charging session.	
	BLOCKED	The EVSE/Connector is not accessible because of a physical barrier, i.e. a car.	
	CHARGING	The EVSE/Connector is in use.	
	INOPERATIVE	The EVSE/Connector is not yet active, or temporarily not available for use, but not broken or defect.	
	OUTOFORDER	The EVSE/Connector is currently out of order, some part/components may be broken/defect.	
	PLANNED	The EVSE/Connector is planned, will be operating soon.	
	REMOVED	The EVSE/Connector was discontinued/removed.	
	RESERVED	The EVSE/Connector is reserved for a particular EV driver and is unavailable for other drivers.	
	UNKNOWN	No status information available (also used when offline).	

The licensee shall contact EVCA_licensing@lta.gov.sg to inform of the intention to integrate their data pipeline when necessary and will be linked up with LTA's technical partner (GovTech).

Annex B: List of licensing conditions applicable to various user profiles

Licensing Requirements											
Capabilities-related	Payment-related			Charger-related	Operations-related						
Capabilities to activate smart charging	Common payment methods	Users to not be required to give deposits	No memberships required for the use of chargers	Chargers to have open backend standards.	Cyber-security requirements	Downtime correction standards	Uptime standards	Data-sharing requirements	Service hotline requirements	Approval for fast charging	Compliance with SCDF's requirements
Fixed chargers – Public											
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Fixed chargers – Private											
					✓			✓	✓	✓	
Fixed chargers – Single-user											
					✓					✓	
BCSS – Public											
	✓				✓	✓	✓	✓	✓		✓
BCSS – Private											
					✓			✓			✓
BCSS – Single-user											
					✓						✓
Non-Fixed Chargers											
	✓	✓	✓					✓	✓		
Legend <div> <div>✓</div> <div>Required to comply</div> </div>											

Annex C: Cybersecurity Requirements

1. Cybersecurity Framework

- 1.1 The Licensee shall develop and establish a cybersecurity framework to ensure the security of the Electric Vehicle Supply Equipment (EVSE), Charging Management System (CMS) and all related system components. This shall include:
 - 1.1.1 A Cybersecurity Committee or equivalent to provide leadership and direction on cybersecurity goals and policies.
 - 1.1.2 Clearly defined cybersecurity roles, responsibilities and authority for managers, administrators, operators and users.
 - 1.1.3 Review of cybersecurity policies, procedures and practices for relevance and effectiveness.
 - 1.1.4 Processes for planning, implementing, evaluating and documenting remedial actions to address cybersecurity vulnerabilities.
 - 1.1.5 Review of major cybersecurity incidents for adequacy of response and controls.

2. Application & Hosting Environment Management

- 2.1 The Licensee shall ensure the application is secure and mitigated against all identified threat scenarios. It shall be hosted on a secure environment. If the application is hosted on a cloud platform, the cloud service provider shall be certified with CSA-STAR or all three of the following ISOs: 27001, 27017, and 27018.

3. Assets, Configuration and Change Management

- 3.1 The Licensee shall maintain an accurate documentation of the EVSE, CMS and all related system components including its configuration.
- 3.2 The Licensee shall develop and establish an effective change management process that governs changes to the EVSE, CMS and all related system components.

4. Access Management

- 4.1 The Licensee shall adopt strong password management and implement access control based on the principle of least privileges for all accounts to protect against unauthorized access to the EVSE, CMS and all related system components.

5. Network Security

- 5.1 The Licensee shall ensure that there are adequate security measures to ensure the confidentiality, integrity and availability of any data transmitted.

6. System Security

- 6.1 The Licensee shall evaluate security measures and appropriate procedures to minimise the potential introduction of malicious codes into the EVSE, CMS and all related system components.

- 6.2 The Licensee shall ensure the EVSE, CMS and all related system components are hardened by disabling unneeded functions, services and unused hardware ports.

7. System Logging and Cybersecurity Monitoring

- 7.1 The Licensee shall develop and establish a security logging policy to facilitate timely detection and response to cybersecurity threats and incidents.
- 7.2 The Licensee shall develop and establish operational processes and procedures for timely detection of malicious cyber activities so that imminent cyber threats are dealt with quickly.

8. Patch Management

- 8.1 The Licensee shall develop and establish a patch management framework which includes policy and processes to ensure timely deployment of system and application updates, stable patches, and definition files to the EVSE, CMS and all related system components.

9. Risk Assessment

- 9.1 The Licensee shall conduct periodic cybersecurity risk assessments for EVSE, CMS and all related system components. Such assessments shall minimally include identification and evaluation of cybersecurity threats, vulnerabilities and impact with mitigating measures.

10. Cybersecurity Incident Management

- 10.1 The Licensee shall develop and establish a robust cybersecurity incident management procedure to effectively handle any cybersecurity incidents.

11. Security Audit

- 11.1 The Licensee shall engage qualified independent third-party security consultant(s) to conduct periodic security audits on the EVSE, CMS and all related system components. The security audits would include validation of cybersecurity controls, conduct of vulnerability assessment and penetration tests (if applicable), and to perform cybersecurity risk assessments.

12. Supply Chain and Third-Party Vendor Management

- 12.1 The Licensee shall develop cybersecurity procedures to protect and mitigate the risk of Supply Chain cybersecurity attacks.
- 12.2 In the event that any part of the EVSE, CMS and related system components is outsourced to one or more third party vendors or service providers, proper security management process and procedures shall be in place to protect data, as well as mitigate against any security risks associated with the outsourced IT service.

13. Security Awareness Programme

- 13.1 The Licensee shall develop and establish an ongoing cybersecurity awareness programme to educate its employees, third-party vendors and service providers and any other users authorised or otherwise permitted to access (including for the purpose of working on or repairing) any EVSE, CMS and all related system components and highlight to these personnel their roles and responsibilities in cyber security.