

CALL FOR PROPOSAL FOR THE DEVELOPMENT, COMMISSIONING, MAINTENANCE AND OPERATION OF CHARGING POINTS FOR ELECTRICAL HARBOUR CRAFT AS PART OF A PILOT AT VARIOUS SITES

TERMS OF REFERENCE

1. INTRODUCTION

- 1.1 The Government of Singapore has set a target for the full decarbonisation of harbour craft (“**HC**”), pleasurecraft and tugboats by 2050, with the electrification, the use of 100% Biofuel (“**B100**”) and other green fuels from 2030 for all new harbour craft.
- 1.2 To support the decarbonisation of HC through electrification, the Maritime and Port Authority of Singapore (“**MPA**”) plans to pilot charging points for electrified Harbour Craft (“**eHC**”) at various sites to test charging technologies and support the development of charging standards and the national charging infrastructure masterplan.
- 1.3 Interested Charging Point Operators are to note that while MPA is the party calling for this proposal, all Terminal Operators (identified in Paragraph 2.1 below) shall have rights to access and evaluate proposals received, whether alone or jointly with MPA, pertaining to their site.

2. CALL FOR PROPOSAL

- 2.1 This Call for Proposal (“**CFP**”) invites proposals from interested, competent parties (“**Charging Point Operators**”) to develop, commission, maintain and operate eHC charging points as part of a pilot at one or more of the following sites:

S/N	Site	Terminal Operator
<i>Public landing facilities</i>		
1.	Marina South Pier (“ MSP ”)	MPA
<i>Aggregated sites including private or licensed operators’ landing facilities</i>		

2.	PSA Marine West Coast Marine Base (“ PSAM-WCB ”)	PSA Marine (“ PSAM ”)
3.	Pasir Panjang Ferry Terminal (“ PPFT ”)	Singapore Cruise Centre Pte Ltd (“ SCCPL ”)
4.	Jurong Port (“ JP ”)	Jurong Port Pte Ltd (“ JPPL ”)
5.	Sebarok Terminal (“ ST ”)	Vopak Terminals Singapore Pte Ltd (“ Vopak ”)

2.2 Charging Point Operators that intend to submit proposals for this pilot at one or more sites must make arrangements and visit the site(s) they intend to submit proposal(s) for, at the respective times set out below:

Venue	Date	Time	Point of Contact (POC)	Contact No.	Contact Email
MSP	7 Sep 2023	0900	Dr Shawn Sim	6375 1569	shawn_sim@mpa.gov.sg
JP-J1 Basin	7 Sep 2023	1400	Mr James Lee / Mr Tee Yang	6413 9352	jameslee@jp.com.sg/ teeyang@jp.com.sg
JP-OMC 2	7 Sep 2023	1600			
PSAM-WCB	12 Sep 2023	1500	Ms Stephanie Cai / Mr Terrence Tan	9755 5024	stephcai@globalpsa.com terrent@globalpsa.com
PPFT	8 Sep 2023	1500	Mr George Koh	9756 9599	georgek@singaporecruise.com.sg
ST	13 Sep 2023	1300	Mr Victor Chew	9824 2746	victor.chew@vopak.ccom

Additional times can be arranged with the designated POCs.

2.3 The Charging Point Operators are to inform the relevant Point(s) of Contact of its attendance at the site visit(s) at least two (2) working days in advance.

2.4 The Charging Point Operators shall identify the exact location to be proposed for the installation of the charging points. The Charging Port Operators shall ensure that they comply with any conditions that may be imposed by the Terminal Operator in relation to the site visit(s), and that their conduct during the site visit(s) shall not affect the operations at the respective sites.

- 2.5 Only proposals from Charging Point Operators which have visited the relevant site(s) submitted for will be evaluated.

3. GENERAL OBLIGATIONS OF CHARGING POINT OPERATORS

- 3.1 The selected Charging Point Operator(s) must, unless otherwise required or permitted by a relevant Terminal Operator, (a) comply with all the obligations listed in this Paragraph 3 and **Appendix 3**¹, regardless of site; and (b) meet the site-specific requirements as set out in Paragraph 4, for each relevant site.
- 3.2 Charging Point Operators will be required to gather information and feedback from users of the charging points (i.e. owners/operators of eHC), site/facility operators, power supplier/s and other relevant parties, and submit these to MPA quarterly. Information and feedback obtained will include the suitability of the various types of charging points for eHC, the optimal capacity of the charging points, the length of time required for charging, the electricity demand and sources, the need for any Energy Storage System (“**ESS**”), the size of any such ESS, and any additional infrastructure requirements for a holistic eHC charging infrastructure. The Charging Point Operator shall permit MPA or its consultants to use the feedback and information gathered for the development of the National eHC Charging Infrastructure Standards and the National eHC Charging Infrastructure Master and Implementation Plan to support the electrification of harbour craft.
- 3.3 The Charging Point Operators must set out in their proposal(s) a list of eHC owners/operators that will be using their charging point(s). Selected Charging Point Operator(s) must also allow any other eHC owners/operators to use these charging points. The Charging Point Operators shall, unless otherwise agreed between the Charging Point Operator and the relevant Terminal Operator, notify the relevant Terminal Operator with no less than one (1) week notice of any intended charging activities at their site. Terminal Operators must be informed of any changes and approvals to be sought for any changes to the schedule as soon as is practically possible.
- 3.4 The costs for each of the development, commissioning, operation, maintenance and removal of the charging point(s) shall be borne entirely by the selected Charging Point Operator(s).
- 3.5 If use of land beyond the boundaries of a site is required, the Charging Point Operator must specify this in its proposal and shall be responsible for obtaining all necessary land rights and approvals from the relevant authorities. The costs for such applications to the relevant authorities shall be borne by the selected Charging Point Operator(s).
- 3.6 If additional infrastructure or modification to existing infrastructure at a site is required, the selected Charging Point Operator(s) must obtain the necessary

¹ A reference to MPA in Appendix 3 wherever appearing, shall be read as a reference to each of the relevant Terminal Operators as the case may be.

approvals from the relevant Terminal Operator and be responsible for the construction and addition of such additional infrastructure or modification to infrastructure without affecting the operations at the site concerned. The cost for such additional infrastructure or modification to existing infrastructure shall be borne by the selected Charging Point Operator(s).

- 3.7 Based on the anticipated profile of eHCs and their likely battery sizes, all charging points under this pilot shall utilise fast Direct Current (“**DC**”) chargers. The chargers will be able to tap on Alternating Current (“**AC**”) from existing substations, or temporary substations to be set up as part of the proposal, with the capacity of switching to and using DC from green energy generation directly when ready.
- 3.8 The development, installation, commission, and maintenance of the proposed charging points must comply with electric vehicle charging standard that may be notified to the Charging Point Operator(s), including but not limited to Technical Reference 25 (“**TR 25**”), and any amendments thereto as may be made from time to time.
- 3.9 While ensuring that the charging standards set out in Paragraph 3.8 above are met, the design and implementation of the charging point(s) must take into consideration the requirements of eHC users, including requirements such as connections, communication systems between the charging point and the batteries of the eHCs and the voltage of electricity, ensuring that the charging point(s) meet the specific needs of the eHC users.
- 3.10 The selected Charging Point Operator(s) shall at its own cost engage a Professional Engineer for the design of all charging point components, including the power connections and switchboard. The Professional Engineer shall ensure that the charging point(s) are safe and appropriate for the charging of eHC. The selected Charging Point Operator/s shall be responsible for the safe development, installation, maintenance and operation of the charging points.
- 3.11 The selected Charging Point Operator(s) must incorporate a control system within the charging point to ensure that the batteries and eHCs are protected from electrical failure and external tampering.
- 3.12 MPA will support the development of firefighting and fire safety measures with the Charging Point Operator(s) and work with the Singapore Civil Defence Force (“**SCDF**”). Such firefighting and fire safety measures must also be endorsed by an appropriate Professional Engineer if required by the SCDF.
- 3.13 The selected Charging Point Operator(s) must provide a high standard of service when discharging services to eHC users, subject to each Terminal Operator’s specific requirements. Minimally, the Charging Point Operator must ensure that the charging point(s) are operational at least 90% of the time over a monthly period during the pilot duration and test the use of renewable energy where feasible.

- 3.14 The selected Charging Point Operator(s) must agree to collect and share the following information with MPA during the period of this pilot on a continuous basis:
- a. Real-time availability status of the Charging Point(s);
 - b. Charging session details, such as start and end times, energy consumed and the fees imposed for each charging session, including without limitation, the following:
 - i eHC registration numbers and unique identifiers, and charging session history for each of its customers, including dates, times and duration of sessions.
 - ii Charging preferences and settings, if available to its customers.
 - iii Charging payment data such as transaction amounts and methods of payment by its customers.
 - iv Charging infrastructure performance, including energy consumption and power tapped from the site and efficiency metrics.
 - v Maintenance and service records, including repairs, upgrades and inspections of the Charging Point(s) and/or the supply of electric power to customers.
 - vi Fault reports and diagnostics data for troubleshooting purposes.
 - vii Data on any technical issues or failures that may affect the operation of Charging Point(s).
 - viii Software versions and updates deployed on the Charging Point(s);
 - ix Any and all feedback received from both customers and non-users of the Charging Point(s);
 - x Records of the costs the Charging Point Operator has to pay for services incurred.
 - xi Integration of the charges with renewables

4. SITE-SPECIFIC DETAILS

4.1 MSP

- a. **Pilot period:** The pilot for the charging point operation will be for a period of two (2) years, with an option for MPA to extend this period by another one (1) year. The pilot period will commence from the day of expiry of the 6-month fitting out period.
- b. **Reinstatement:** Upon completion or earlier termination of the pilot, unless otherwise required by MPA, the selected Charging Point Operator(s) must demolish all infrastructure developed or modified and reinstate the location on which the charging point(s) were installed to its original state and condition (fair wear and tear excepted) at the Charging Point Operator(s)'s own cost within one (1) month of completion or termination of the pilot period, unless the Operator is also the selected Operator for subsequent phases where discussion on the extension of equipment will be discussed before the expiry of this pilot.

DEVELOPMENT MODEL

- c. There is potential for up to two (2) charging points to be installed at MSP.
- d. **Power sources:** There are two (2) available power sources at MSP:
 - i. **Source 1:** The switch room where the available capacity is about 400kVA.
 - ii. **Source 2:** The selected Charging Point Operator(s) will have to set up a switch board at a location to be jointly agreed by MPA and Singapore Power Grid ("**SPPG**") and connect the power from SPPG's transformer room to this switch board for tapping on by the charging point(s). The cost incurred in setting up the switch board and related works must be borne by the selected Charging Point Operator(s).
- e. Charging Point Operators interested in participating in the pilot at MSP must specify in their proposals which power source (or both) they intend to use.
- f. Charging Point Operators must assess and ensure that the charging operations at MSP meet the requirements of the eHC users without affecting normal operations at MSP. Measures such as ESS may be considered to optimise the capacity of the charging point(s). All costs related to the setting up and operation of ESS shall be borne by the selected Charging Point Operator(s).

OPERATION MODEL AND FEE FRAMEWORK

- g. The selected Charging Point Operator(s) shall pay MPA a concession fee to use such part of MSP on which the charging point(s) will be installed, and for the installation and operation of charging point(s) at MSP. This concession fee will be based on the electricity consumed by the charging point(s). Charging Point Operators interested in participating in the pilot at MSP must propose the rates of the concession fee to be paid to MPA, bearing in mind that the minimum rate for the concession fee is **S\$0.05 per kwh** of electricity consumed by a charging point. The payment of the concession fee shall be made to MPA monthly based on the electricity consumed by each charging point(s)'s operations.
- h. As a show of support for this pilot, the selected Charging Point Operator(s) will only need to pay MPA a nominal fee of **S\$1.00** as concession fee for the first year of the pilot. From the second year, the concession fee proposed by the selected Charging Point Operator(s) shall apply and payment to MPA shall be made monthly.
- i. The selected Charging Point Operator(s) may charge eHC users for the use of the charging point(s). Charging Point Operators must include in their proposals a framework for the prices to be charged to the eHC users. Such a price framework must include the following details:
 - i. the charging fee (S\$/kwh of electricity charged to an eHC) for the services provided to eHC users as a function of the electricity tariff (which may vary over time), and taking into consideration other costs;
 - ii. the concession fee to be paid to MPA; and
 - iii. the formula used to derive (i) and (ii) above.

4.2 PSAM-WCB

- a. **Pilot period:** The pilot for the charging point operation will be for a period of two (2) years, PSAM and the selected Charging Point Operator may mutually agree to extend the period by another one (1) year. The charging points should be installed and operational within six (6) months of the date on which the agreement between the selected Charging Point Operator and PSAM is signed.

Reinstatement: Upon completion or earlier termination of the pilot, unless otherwise agreed to by PSAM and the selected Charging Point Operator, the selected Charging Point Operator must demolish all infrastructure developed or modified and reinstate the location on which the charging point were installed to their original state and condition (fair wear and tear excepted) at the Charging Point Operator's cost within

one (1) month of completion or termination of the pilot period, unless the Operator is also the selected Operator for subsequent phases where discussion on the extension of equipment will be discussed before the expiry of this pilot.

DEVELOPMENT MODEL

- b. There is potential to set up one (1) charging point at PSAM-WCB.
- c. **Power sources:** There is one (1) available power source at PSAM-WCB with a capacity of about 350kVA. The selected Charging Point Operator must set up a switch board at a location to be agreed by PSAM and connect the power from the transformer room to this switch board for tapping on by the charging point. All costs incurred in setting up this switch board and related works must be borne by the selected Charging Point Operator.
- d. Charging Point Operators must assess and ensure that the charging operations at PSAM-WCB meet the requirements of the eHC users without affecting normal operations at PSAM-WCB. Measures such as ESS may be considered to optimise the capacity of the charging point. All costs related to the setting up and operation of ESS must be borne by the selected Charging Point Operator.

OPERATION MODEL AND FEE FRAMEWORK

- e. PSAM will charge the selected Charging Point Operator a concession fee to use such part of PSAM-WCB on which the charging point will be installed, and for the installation and operation of charging point at PSAM-WCB. This concession fee will be based on the electricity consumed by the charging point. Charging Point Operators interested in participating in the pilot at PSAM-WCB must propose the rates of the concession fee to be paid to PSAM, bearing in mind that the minimum rate for the concession fee is **S\$0.05 per kwh** of electricity consumed by a charging point. The payment of the concession fee shall be made monthly based on the electricity consumed by the charging point's operations.
- f. As a show of support for this pilot, PSAM will collect a nominal fee of **S\$1.00** as concession fee for the first year of the pilot. From the second year, the concession fee proposed by the selected Charging Point Operator shall apply and payment to PSAM shall be made monthly.
- g. The selected Charging Point Operator may charge eHC users for the use of the charging point. Charging Point Operators must include in their proposals a framework for the prices to be charged to the eHC users. Such a price framework must include the following details:

- i. the charging fee (S\$/kwh of electricity charged to an eHC) for the services provided to eHC users as a function of the electricity tariff (which may vary over time), and taking into consideration other costs;
- ii. the concession fee to be paid to PSAM; and
- iii. the formula used to derive (i) and (ii) above.

4.3 PPFT

- a. **Pilot period:** The pilot for the charging point operation will be for a period of two (2) years, SCCPL and the selected Charging Point Operator may mutually agree to extend the period by another one (1) year. The charging point must be installed and operational within six (6) months of the date on which the agreement between the selected Charging Point Operator and SCCPL is signed.
- b. **Reinstatement:** Upon completion or earlier termination of the pilot, unless otherwise agreed to by the SCCPL and the selected Charging Point Operator, the selected Charging Point Operator must demolish all infrastructure developed or modified and reinstate the location on which the charging point was installed to their original state and condition (fair wear and tear excepted) at the Charging Point Operator's cost within one (1) month of completion or termination of the pilot period, unless the Operator is also the selected Operator for subsequent phases where discussion on the extension of equipment will be discussed before the expiry of this pilot.

DEVELOPMENT MODEL

- c. There is potential to set up one (1) charging point at PPFT.
- d. **Power sources:** There are no available 22kV electrical substation at PPFT. Charging Point Operators interested in participating in the pilot at this site must propose the setting up of a new electrical substation (which could be a temporary substation) within PPFT. All costs related to the setting up of such new electrical substation will be borne by the selected Charging Point Operator. The new electrical substation must have adequate capacity to support the charging point.
- e. The selected Charging Point Operator must assess and ensure that the charging operations at PPFT meet the requirements of the eHC users without affecting normal operations at PPFT. Measures such as ESS may be considered to optimise the capacity of the charging point. All costs related to the setting up and operation of ESS must be borne by the selected Charging Point Operator.

OPERATION MODEL AND FEE FRAMEWORK

- f. SCCPL will charge the selected Charging Point Operator a rental fee for the use of land space for the constructing and operation of an electrical substation and the charging point at **S\$15/m² per month**. Additional land cost imposed by SLA and other authorities for setting up of the electrical substation will be borne by the Charging Point Operator. The Charging Point Operator will own and maintain the electrical substation.
- g. The selected Charging Point Operator may charge eHC users for the use of the charging point(s). Charging Point Operators must include in their proposals a framework for the prices to be charged to the eHC users. Such a price framework must include the following details:
 - i. the charging fee (S\$/kwh of electricity charged to an eHC) for the services provided to eHC users as a function of the electricity tariff (which may vary over time), and taking into consideration the rental of space (S\$15/m² per month) and other costs; and
 - ii. the formula used to derive (i) above.

4.4 JP

- a. **Pilot period:** The pilot for the charging point operation will be for a period of two (2) years, JPPL and the selected Charging Point Operator may mutually agree to extend the period by another one (1) year. The charging points should be installed and operational within six (6) months of the date on which the agreement between the selected Charging Point Operator and JPPL is signed.
- b. **Reinstatement:** Upon completion or earlier termination of the pilot, unless otherwise agreed to by the JPPL and the selected Charging Point Operator, the selected Charging Point Operator must demolish all infrastructure developed or modified and reinstate the location on which the charging point(s) were installed to their original state and condition (fair wear and tear excepted) at the Charging Point Operator's cost within one (1) month of completion or termination of the pilot period, unless the Operator is also the selected Operator for subsequent phases where discussion on the extension of equipment will be discussed before the expiry of this pilot.

DEVELOPMENT MODEL

- c. There is potential for up to two (2) charging points to be installed at JP. JPPL has identified two (2) locations at which the charging point(s) can be installed:
 - i. J1 basin at Jurong Port ("**J1 Basin**"); and/or

- ii. OMC 2 at Tuas (“**OMC 2**”).
- d. **Power sources:** Charging Point Operators interested in participating in the pilot at JP shall note the following power sources at the two locations:
 - i. **J1 Basin:** There are no available power sources at J1 Basin’s switch room. Charging Point Operators interested in participating in the pilot at J1 Basin must propose to include the setting up of a new Overground Box (“**OGB**”) with the power capacity required to support the charging operations within JP. Such an OGB may draw incoming power supply directly from SPPG substation. All cost related to this setting up of an OGB and drawing on power supply will be borne by the selected Charging Point Operator.
 - ii. **OMC 2:** There is a Low Tension (“**LT**”) switch room maintained by JPPL at OMC 2 with available power capacity of about 100 kVA. The selected Charging Point Operator must set up a switch board at a location to be agreed between JPPL and JTC Corporation. The costs incurred in setting up this switch board and all related works shall be borne by the selected Charging Point Operator.
- e. Charging Point Operators must assess and ensure that the charging operations at JP meet the requirements of the eHC users without affecting normal operations at JP. Measures such as ESS may be considered to optimise the capacity of the charging point. All costs related to the setting up and operation of ESS must be borne by the selected Charging Point Operator(s).
- f. Charging Point Operators interested in participating in the pilot at JP must specify in their proposals which power source (or both) they intend to use.

OPERATION MODEL AND FEE FRAMEWORK

- g. Charging Point Operators are to note that the fees chargeable for the pilot at J1 Basin and at OMC 2 differ:
 - i. For **J1 Basin**, JPPL will charge the selected Charging Point Operator a rental fee for the use of space for constructing and usage of an electrical substation and the charging point at a rate of **S\$15.20/m² per month**. The selected Charging Point Operator shall be responsible for the maintenance of the electrical substation constructed.
 - ii. For **OMC 2**, JPPL will charge the selected Charging Point Operator a concession fee to use such part of OMC 2 on which the charging point(s) will be installed, and for the installation and operation of charging point. This concession fee will be based on

the electricity consumed by the charging point. Charging Point Operators interested in participating in the pilot at JP - OMC2 must propose the rates of the concession fee to be paid to JPPL, bearing in mind that the minimum rate for the concession fee is **S\$0.05 per kwh** of electricity consumed by a charging point. As a show of support for this pilot, JPPL will collect a nominal fee of **S\$1.00** as concession fee for the first year of the pilot at JP – OMC 2. From the second year, the concession fee proposed by the selected Charging Point Operator shall apply and payment to JPPL shall be made monthly.

- h. The selected Charging Point Operator(s) may charge eHC users for the use of the charging point(s). The requirements for the proposals for J1 Basin and OMC 2 differ.
- i. For **J1 Basin**, Charging Point Operators must include in their proposals a framework for the prices to be charged to the eHC users. Such a price framework must include the following details:
 - i. the charging fee (S\$/kwh of electricity charged to an eHC) for the services provided to eHC users as a function of the electricity tariff (which may vary over time), and taking into consideration the rental of space (S\$15.20/m² per month) and other costs; and
 - ii. the formula used to derive (i) above.
- j. For **OMC 2**, Charging Point Operators must include in their proposals a framework for the prices to be charged to the eHC users. Such a price framework must include the following details:
 - i. the charging fee (S\$/kwh of electricity charged to an eHC) for the services provided to eHC users as a function of the electricity tariff provided by JPPL (which may vary over time), and taking into consideration other costs;
 - ii. the concession fee to be paid to JPPL; and
 - iii. the formula used to derive (i) and (ii) above.

4.5 ST

- a. **Pilot period:** The pilot for the charging point operation will be for a period of two (2) years. Vopak and the selected Charging Point Operator may mutually agree to extend the period by another one (1) year. The commencement of the two-year pilot period shall be on a day mutually agreed between the selected Charging Point Operator and Vopak.
 - i. Charging Point Operators interested in participating in the pilot at ST must include in their proposal the length of time required for their proposed charging point to be installed, commissioned and

be fully operational, taking into account the approving and development processes.

- ii. Subject to agreement between Vopak and the selected Charging Point Operator, the system of renewable energy capturing devices (solar and/or tidal) and ESS must be designed to be operational for ten (10) years. In addition to supporting the pilot operation of the charging point, the charging point operator must ensure that the design of the system of renewable energy capturing devices (solar and/or tidal) must also be capable of generating and supplying renewable energies for other uses and purposes, including other charging point(s) installed by other Charging Point Operators after the pilot period (if any).
- b. **Reinstatement:** Upon completion or earlier termination of the pilot, unless otherwise agreed to by Vopak and the selected Charging Point Operator, the selected Charging Point Operator must, at its own cost, demolish all infrastructure constructed or modified and reinstate to the original state and condition (fair wear and tear excepted): -
- i. the area of the site on which the charging point was installed, within one (1) month thereof; and
 - ii. the area of the site on which the system of renewable energy capturing devices (solar and/or tidal) was constructed, within three (3) months thereof.

Should the Charging Point Operator in the pilot phase is also the selected Charging Point Operator for subsequent phases, discussion on the extension of equipment will be discussed before the expiry of this pilot.

DEVELOPMENT MODEL

- c. There is potential to set up one (1) charging point at ST.
- d. **Power sources:** There are no power sources to support charging operations at ST. Charging Point Operators must include in their proposals the setting up of a system to harvest renewable energies, including solar and/or tidal energies, to support charging operations at this site. Charging Point Operators must assess the amount of renewable energy that can be harnessed at ST, and form a team with solar and/or tidal energy partners to set up the necessary solar and/or tidal energy systems at its own cost to estimate the quantity of energy-capturing devices and systems required to support charging operations at ST. There is a potential for MPA to supply solar panels required for

the solar/tidal system. Further arrangements and details such as the ownership of electricity generated shall be discussed and agreed naturally between MPA and the selected charging point operator.

- e. ESS must be deployed to store the harnessed renewable energy. The costs for deploying the energy capturing devices (i.e., solar panels or tidal turbines), ESS, the connecting cables from the ESS to the charging point and all other associated costs must be borne by the selected Charging Point Operator, which may decide to share such costs with its solar and/or tidal energy partners. The possible location(s) for the deployment of the ESS shall be determined and agreed upon with Vopak.
- f. Charging Point Operators must include in their proposal the land-take required for the deployment of the renewable energy capture devices and ESS.
- g. The Charging Point Operators must assess and ensure that the charging operations at ST will meet the requirements for eHC users without affecting normal operations at ST.
- h. The potential location(s) for the deployment of the solar/tidal energy system are boxed in white in the image below. The selected Charging Point Operator shall conduct a feasibility study, an Environmental Impact Assessment and any other relevant studies on the locations for the deployment of the solar/tidal energy system. MPA will also support the selected Charging Point Operator in the engagement of government agencies on the use of sea space pay any fees that such agencies may impose. The outcomes of the studies should receive the concurrence of Vopak before installation work is commenced.



OPERATION MODEL AND FEE FRAMEWORK

- i. Vopak will charge the selected Charging Point Operator a rental fee for the use of land space for the construction and use of renewable energy capturing devices, ESS and the charging point at a rate of **S\$14.21/m² per month**. Sea space rental may be chargeable by the relevant Government agencies if the use of sea space is required for the set-up of renewable energy capturing devices, and if the use of sea space is so required, the selected Charging Point Operator will be responsible to find out if rent is payable and to make payment of such rent.

- j. The selected Charging Point Operator may charge eHC users for the use of the charging point. Charging Point Operators must include in their proposals a framework for the prices to be charged to the eHC users. Such a price framework must include the following details:
 - i. the charging fee (S\$/kwh of electricity charged to an eHC) for the services provided to eHC users as a function of the electricity tariff if the owner of the electricity is by the energy partners of the charging point operator and taking into consideration the rental of space (**S\$14.21/m²**) and other costs;
 - ii. the rate of renewable electricity (in S\$/kWh) to be charged to other service providers at ST, if the electricity generated by the renewable energy sources is owned by the Charging Point Operator's solar and/or tidal energy partners during the pilot period;
 - iii. the rate of renewable electricity (in \$/kWh) to be charged to other service providers at ST beyond the pilot period; and
 - iv. the formula used to derive (i) above.

5. SUBMISSION OF PROPOSALS

- 5.1 Charging Point Operators interested in participating in this pilot must only submit their proposals (2 hardcopies) in a sealed envelope, with the envelope label provided in **Appendix 2**, by 6 October 2023 at 04:00pm (Singapore Time) ("**Closing Date**") to MPA's **TENDER BOX 1** located at:

MPA
460 Alexandra Road
Level 18 mTower
Singapore 119963

- 5.2 As the requirements for each site differ, Charging Point Operators that intend to submit proposals for more than one (1) site must submit a separate proposal for each site.
- 5.3 Any proposals not submitted in accordance with Paragraph 5.1 and 5.2 will not be considered.
- 5.4 MPA will ensure that the proposals received are opened in the presence of two witnesses. Proposals submitted for pilots at any of the four aggregated sites listed in Paragraph 2.1 above will be disseminated to the respective Terminal Operators for evaluation.
- 5.5 Proposals submitted must minimally include the following:
- a. The Charging Point Operator's proposed manpower resourcing, including details on their manpower's professional and technical expertise and experience;
 - b. A detailed description of the proposed charging points which should reflect the Charging Point Operator's understanding of operations at the site for which the proposal is targeted, and the standards to be adopted for the installation of the charging point(s).
 - c. Method statements including how the charging point(s) is/are to be operated and an estimation of the number of eHCs that the charging point(s) could potentially serve over the pilot period;
 - d. Site drawings which specify the exact location of the charging point(s) and design drawings of the proposed charging point(s);
 - e. Schematic layout(s) of the infrastructure required at the project location over the pilot period;

- f. A detailed timeline of the implementation schedule to be adopted, including the timeline for the application and obtaining of requisite approvals (if any)
- g. A list of eHC owners/operators that will be using their charging point(s), the rate at which these eHC owners/operators will be charged (if agreed) and a confirmation that other eHC owner/operators will be allowed to use its charging point(s) at the same rate;
- h. Detailed technical specifications of the charging point(s).
- i. A detailed financial proposal, which includes a completed copy of the form in **Appendix 1** and the respective price frameworks for each site:
 - i. For proposals for pilot charging points at MSP, the requirements outlined in Paragraph 4.1(i) above;
 - ii. For proposals for pilot charging points at PSAM-WCB, the requirements outlined described in Paragraph 4.2(h) above;
 - iii. For proposals for pilot charging points at PPFT, the requirements outlined in Paragraph 4.3(g) above;
 - iv. For proposals for pilot charging points at JP – J1 Basin, the requirements outlined in Paragraph 4.4(h) above;
 - v. For proposals for pilot charging points at JP – OMC 2, the requirements outlined in Paragraph 4.4(i) above; and/or
 - vi. For proposals for pilot charging points at ST, the requirements outlined in Paragraph 4.5(j) above..
- j. Express agreement to share the information listed in Paragraph 3.14 above with MPA during the pilot period;
- k. A copy of the Charging Point Operator’s Annual Report containing audited financial accounts for the last two financial years;
- l. A copy of the Charging Point Operator’s Business Profile from Accounting and Corporate Regulatory Authority (“**ACRA**”). The copy of this Business Profile must be dated not more than 7 days before the closing date of this CFP.

5.6 Any questions, requests for clarification, including any request for extension of time, must be submitted to MPA at least seven (7) working days before the closing date stated in Paragraph 5.1 above. All questions may be directed to the following point of contact:

Dr Shawn Sim
 Port & Industry Integrated Planning Department
 Engineering & Project Management Division
 Tel : (65) 6375 1569

Email : shawn_sim@mpa.gov.sg

- 5.7 Submitted proposals must have a validity period of one (1) year from the Closing Date or such longer period as may be separately agreed to in writing between the Charging Point Operator and MPA.
- 5.8 No proposal may be withdrawn after the Closing Date and time.
- 5.9 The fees quoted in accordance with Paragraph 5.5(i) above shall be exclusive of Goods and Services Tax (“**GST**”) and must remain valid and unchanged from the time the proposal is submitted to the end of the pilot period.

6. EVALUATION CRITERIA

- 6.1 Failure to comply with the following critical criteria will result in proposals being rejected:

Critical Criteria

- a. Attendance at the site visit(s) in accordance with Paragraph 2.2 and Paragraph 2.3 above;
- b. The requirement set out in Paragraph 5.5(g) above; and
- c. Charging Point Operators must submit their hardcopy proposals to the address indicated in Paragraph 5.1

- 6.2 Proposals received shall be evaluated in line with the following criteria:

<u>Rank</u>	<u>Criteria</u>
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1	Innovation & Integration with Renewables
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Creativity of proposal in integrating renewables and meeting needs of eHC users in terms of power supply, berthing and operation of vessels, and maintenance.

2	Experience and Development Plans
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Prior experience in developing and demonstrating electric charging point projects in Singapore or overseas, as well as business plans for Singapore and beyond.

3	Proposal
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(i) Demonstration of the Charging Point Operator’s understanding of their obligations during the pilot; and

(ii) Completeness of the proposal and its compliance with the requirements set out in Paragraph 5 above.

(iii) Extent of compliance with the obligations set out in Paragraphs 2 to 4 above, and the obligations set out in **Appendix 3**.

4 **Implementation Capability**

Charging Point Operators must demonstrate sufficient resources (financial and otherwise) to see through the completion of the pilot trials and work with agencies and other partners on the development of standards.

5 **Pricing Plans**

The competitiveness of the proposed rates and the formula for calculating the fees to be charged to the eHC users, as set out in the detailed financial proposal required in Paragraph 5.5(i).

- 6.3 Proposals will be evaluated either solely by a Terminal Operator or jointly by MPA and a Terminal Operator.
- 6.4 Nothing in this CFP shall be construed as an offer or be binding upon MPA and/or any of the Terminal Operators. Participation in this CFP does not oblige MPA and/or any of the Terminal Operators to enter into an agreement with a Charging Point Operator which submits a proposal through this CFP and should not be construed as amounting to any representation or warranty that MPA and/or any of the Terminal Operators will necessarily select and enter into such an agreement with any Charging Point Operator.
- 6.5 MPA and/or the other Terminal Operators may accept the whole or any part(s) of the proposals as it may decide, unless the Charging Port Operator expressly stipulates in its proposal that certain parts of the proposal are to be treated as indivisible. The prices shall be correspondingly adjusted in accordance with the prices set out in **Appendix 1**.
- 6.6 The proposal and all supporting data and documentation to be supplied by the Charging Point Operator shall be written in readily comprehensible English language.
- 6.7 In no case will any expense incurred by the Charging Point Operator in the preparation or submission of its proposal or subsequent clarifications be borne by MPA and/or any of the other Terminal Operators.

- 6.8 All proposals submitted pursuant to this CFP and all matters arising hereunder shall be governed by the laws of the Republic of Singapore.
- 6.9 Any disputes and claims arising out of or relating to this CFP shall be referred to mediation at the Singapore mediation Centre in accordance with the Mediation Procedure. If and to the extent that any such dispute cannot be settled by mediation within six (6) months of the commencement of the mediation or such other period of time as may be mutually agreed between the parties, the parties concerned agree that the dispute shall be referred to and finally resolved by arbitration in Singapore in accordance with the Rules of the Singapore Chamber of Maritime Arbitration for the time being in force which Rules are deemed to be incorporated by reference to this Clause. The tribunal shall consist of a single arbitrator. The language of the arbitration shall be English. Any award made thereunder shall be final and binding upon the parties concerned and judgment on such award may be entered in any court or tribunal having jurisdiction thereof.
- 6.10 MPA shall have the right to amend any terms in, or to issue supplementary terms to this CFP at any time prior to the Closing Date and time.
- 6.11 MPA shall not be liable for any loss of profit or indirect or consequential losses arising from or in connection with any failure by MPA to comply with its obligations in conducting this CFP, considering or evaluating any proposals or accepting any proposals. Any liability shall be limited to the costs of preparing and submitting the proposal reasonably incurred by the Charging Point Operator.

7. CONFIDENTIALITY

- 7.1 Except with the prior written consent of MPA, the Charging Point Operators shall not disclose to any person (other than employees, servants and agents on a need-to-know basis, for purposes of preparing or submitting a proposal or subsequent clarifications) this Call for Proposal (CFP) or any of its provisions or any specifications, plans, drawings, patterns, samples or information issued by MPA.
- 7.2 MPA may require unsuccessful Charging Point Operators to return or destroy any specifications, plans, drawings, patterns, samples or information issued by MPA in connection with this CFP.
- 7.3 MPA shall have the right to disclose any and all proposals, data, documentation and clarifications received further to this CFP, with the Terminal Operators.

8. OWNERSHIP OF PROPOSALS

- 8.1 All documents submitted by a Charging Point Operator in response to this CFP shall become the property of MPA. However, intellectual property in the information contained in the proposal shall remain vested in the Charging Point Operator.

9. CLARIFICATIONS ON PROPOSAL

- 9.1 In the event MPA [and/or the other Terminal Operators] seeks clarification on any aspect of the Charging Point Operator's proposal, the Charging Point Operator shall provide full and comprehensive responses within seven (7) days of notification.

10. FORMAL AGREEMENT

- 10.1 The selected Charging Point Operator(s) shall be informed via email through the respective POCs listed in Paragraph 2.2 above.
- 10.2 If the proposal of a Charging Point Operator is selected, the selected Charging Point Operator(s) will enter into a separate, legally binding agreement with the relevant Terminal Operator. The terms of such an agreement will (unless otherwise permitted by a Terminal Operator), include at the minimum the requirements in this TOR and the obligations of the selected Charging Point Operator(s) listed in **Appendix 3**.

CALL FOR PROPOSAL FOR THE DEVELOPMENT, COMMISSIONING, MAINTENANCE AND OPERATION OF CHARGING POINTS FOR ELECTRICAL HARBOUR CRAFT AS PART OF A PILOT AT VARIOUS SITES

BREAKDOWN OF PRICES

Note :

1. Charging Point Operators are required to complete and submit **Appendix 1** for each bid site together with the proposal before the Closing Date and time as specified. Failure to do so will result in a **rejection** of the proposal.
2. Rates or Fees quoted shall exclude GST.
3. The indicated electricity tariff rates is based on the prevailing rates w.e.f 1 Jul – 30 Sep 2023

1) Marina South Pier (MSP)

Year	Row	Concession to be paid to Terminal Operator
1	A	S\$1
	B	
2	C	S\$____/kwh (\geq \$0.05/kwh)
	D	S\$_____ (Total for year 2)
3	E	S\$____/kwh (\geq \$0.05/kwh)
	F	S\$_____ (Total for year 3)
Estimated Total		S\$_____ (i.e. S\$1 + Row D + Row F)

2) PSA Marine West Coast Base (PSAM WCB)

Year	Row	Concession to be paid to PSAM	Electricity Tariff to be paid to PSAM
1	A	S\$1	S\$0.296/kwh ^{Note3}
	B		S\$ _____ (Total for year 1)
2	C	S\$ _____/kwh (>= \$0.05/kwh)	S\$0.296/kwh ^{Note3}
	D	S\$ _____ (Total for year 2)	S\$ _____ (Total for year 2)
3	E	S\$ _____/kwh (>= \$0.05/kwh)	S\$0.296/kwh ^{Note3}
	F	S\$ _____ (Total for year 3)	S\$ _____ (Total for year 3)
Estimated Total		S\$ _____ (i.e. S\$1 + Row D + Row F)	S\$ _____ (i.e. Row B + Row D + Row F)

3) Pasir Panjang Ferry Terminal (PPFT)

Year	Row	Rental Fee to be paid to SCCPL
1	A	S\$15/m ² per month
	B	S\$ _____ (Total for year 1)
2	C	S\$15/m ² per month
	D	S\$ _____ (Total for year 2)
3	E	S\$15/m ² per month
	F	S\$ _____ (Total for year 3)
Estimated Total		S\$ _____ (i.e. Row B + Row D + Row F)

4) Jurong Port J1-Basin (JP J1-Basin)

Year	Row	Rental Fee to be paid to JPPL
1	A	S\$15.20/m ² per month
	B	S\$ _____ (Total for year 1)
2	C	S\$15.20/m ² per month
	D	S\$ _____ (Total for year 2)
3	E	S\$15.20/m ² per month
	F	S\$ _____ (Total for year 3)
Estimated Total		S\$ _____ (i.e. Row B + Row D + Row F)

5) Jurong Port OMC2 (JP – OMC2)

Year	Row	Concession to be paid to JPPL	Electricity Tariff to be paid to JPPL
1	A	S\$1	S\$0.296/kwh ^{Note3}
	B		S\$ _____ (Total for year 1)
2	C	S\$ _____/kwh (>= \$0.05/kwh)	S\$0.296/kwh ^{Note3}
	D	S\$ _____ (Total for year 2)	S\$ _____ (Total for year 2)
3	E	S\$ _____/kwh (>= \$0.05/kwh)	S\$0.296/kwh ^{Note3}
	F	S\$ _____ (Total for year 3)	S\$ _____ (Total for year 3)
Estimated Total		S\$ _____ (i.e. Row B + Row D + Row F)	S\$ _____ (i.e. Row B + Row D + Row F)

6) Sebarok Terminal (ST)

Year	Row	Rental Fee to be paid to Vopak
1	A	S\$14.21/m ² per month
	B	S\$ _____ (Total for year 1)
2	C	S\$14.21/m ² per month
	D	S\$ _____ (Total for year 2)
3	E	S\$14.21/m ² per month
	F	S\$ _____ (Total for year 3)
Estimated Total		S\$ _____ (i.e. Row B + Row D + Row F)

**TENDER BOX
NO. 1**

ENVELOPE LABEL

**MARITIME AND PORT AUTHORITY OF SINGAPORE
460, ALEXANDRA ROAD
#18-00 MTOWER
SINGAPORE 119963**

SUBJECT	CALL FOR PROPOSAL FOR THE DEVELOPMENT, COMMISSIONING, MAINTENANCE AND OPERATION OF CHARGING POINTS FOR ELECTRICAL HARBOUR CRAFT AS PART OF A PILOT AT VARIOUS SITES
CLOSING DATE	6 OCTOBER 2023 (4.00 PM) (SINGAPORE TIME)
NAME OF COMPANY	
COMPANY'S ADDRESS	
PROPOSAL FOR :	<Name of the Site>

✂ ----- (Cut and paste this Label on envelope cover for your Submission) -----

**CALL FOR PROPOSAL FOR THE DEVELOPMENT,
COMMISSIONING, MAINTENANCE AND OPERATION OF
CHARGING POINTS FOR ELECTRICAL HARBOUR CRAFT
AS PART OF A PILOT AT VARIOUS SITES**

OBLIGATIONS OF THE CHARGING POINT OPERATOR

Supply of Electric Power

- 1.1 The Charging Point Operator shall, before the expiry of the fitting-out period, commence its business of supplying and/or providing electric power to electrified harbour craft at the specific section of the site on which the charging point(s) are to be installed (“Licensed Area”).
- 1.2 The Charging Point Operator shall at all times during the term:-
 - 1.2.1 use its best endeavours and devote all necessary efforts, resources and support to offer and promote its supply of electrical power to eHCs within the Port of Singapore; and
 - 1.2.2 carry out and complete the supply of electrical power to eHCs in accordance with such terms, requirements, specifications, and service levels as the MPA may specify.
- 1.3 The Charging Point Operator shall not at any time, communicate in any manner, promote, market or hold itself or its services as being endorsed by MPA, or represent that MPA has certified or affirmed that its electrical power and/or services are among other things, fit for any purpose and/or free of any defects.
- 1.4 The Charging Point Operator shall ensure that its supply of electrical power and related services shall minimally meet the requirements set out in the Terms of Reference and its Proposal, and offer the best value to its customers, taking into account factors including but not limited to, suitability for charging each eHC and quality and reliability of the electrical power supplied.

Charging Point(s)

Charging Point(s)

- 1.5 The Charging Point Operator shall ensure that such number and type of charging point(s) as specified in its proposal, are installed in the agreed location within the agreed fitting-out period.

Compliance with Standards

- 1.6 The Charging Point Operator shall ensure that its charging point(s) and its operations thereof:-
 - 1.7
 - 1.6.1 comply with all applicable standards (including without limitation TR 25) in respect of electric vehicle charging, including any amendments thereto as may be made from time to time;
 - 1.6.2 comply with the National Electrical Harbour Craft Charging Infrastructure Standards, when such standards are established and published; and
 - 1.6.3 any additional requirements as may be informed by MPA in writing from time to time.

Costs and Risks of Charging Point(s)

- 1.7 The Charging Point Operator shall solely bear all costs and expenses associated with and all work required to be performed for the Permitted Use (i.e. (a) the supply, installation, operation, maintenance, repair, replacement and removal of such number of charging point(s) as stipulated in its proposal; and (b) the offer and supply of electric power to electrified harbour craft ("**Permitted Use**"), including supplying any labour, works, materials or other supplies or consumables for the purpose of the proper functioning of the Charging Point(s), including without limitation, charging dispensers, mounting substrates or supports wiring and connections, power inverters, service equipment, metering equipment, energy storage systems and other interconnections necessary for the operation of the charging point(s).
- 1.8 The Charging Point Operator shall bear all risk of damage, loss or destruction to the charging point(s) and shall procure any insurance it may deem necessary in respect of the charging point(s). MPA shall not be liable to the Charging Point Operator, nor shall the Charging Point Operator have any claim whatsoever against MPA for any damage, loss or destruction of the Charging Point(s) unless such damage, loss or destruction were directly caused by the gross negligence or wilful misconduct of MPA.
- 1.9 The Charging Point Operator shall bear all risk of loss and/or damage with respect to the Charging Point/s and shall indemnify MPA from any and all claims resulting from such loss or damage.

1.10 If the Charging Point is

- (i) materially damaged or destroyed, or suffers any other material loss, or
- (ii) condemned, confiscated or otherwise taken, in whole or in material part, or
- (iii) the use thereof is otherwise diminished so as to render it unsafe or impracticable to be used for the continued supply of electricity,

the Charging Point Operator shall either cause (A) the Charging Point to be rebuilt and placed at the earliest practical date or (B) another materially identical Charging Point to be built in the proximate area subject to MPA's approval and availability of an alternate site.

Operation and Maintenance of Charging Point(s)

1.11 The Charging Point Operator shall at its own cost and expense, ensure that:-

- 1.11.1 the Charging Point(s) are functional and in good working order and condition, with an uptime of at least 90% minimally over a monthly period and shall be solely responsible for the operation and maintenance of the Charging Point(s);
- 1.11.2 any damage, issues or problems with the Charging Point/s are promptly repaired and resolved;
- 1.11.3 in the event that the Charging Point(s) malfunctions, the Charging Point Operator shall ensure that the Charging Point(s) are repaired and operable within 3 days (or such other period as MPA may agree to);
- 1.11.4 the Charging Point(s) shall be operable within 3 days from the commencement of any periodic maintenance required;

1.12 The Charging Point Operator shall permit MPA and its duly authorised agents with or without workmen and others at all reasonable times to have access to and examine the condition of the Charging Point(s), its location and structures the Charging Point(s) is/are installed on (if any). Thereupon, MPA may serve upon the Charging Point Operator notice in writing specifying any necessary repairs of the damage caused by the Charging Point Operator to be done and require the Charging Point Operator forthwith to execute the same and if the Charging Point Operator shall not within seven (7) days after service of such notice (or sooner if required by MPA for cases where urgent repairs to the Charging Point(s) are required) proceed diligently with the execution of such repairs then to permit MPA to execute such repairs and the reasonable costs and expenses thereof shall be a debt due from the Charging Point Operator to

MPA and be forthwith recoverable by action if the damage is caused by the Charging Point Operator.

- 1.13 The Charging Point Operator shall be fully responsible for the safe installation, operation, maintenance, service, repair, replacement and removal of the Charging Point(s), and shall take all necessary precautions to ensure the safety of those employed to carry out the installation, operation, maintenance, service, repair, replacement, and removal of the Charging Point/s on the Licensed Area. The Charging Point Operator shall ensure that all activities relating to the installation, operation, maintenance, service, repair, replacement and removal of the Charging Point/s are conducted in accordance with all applicable laws, rules, standards, codes and ordinances and in such a manner as will not unreasonably interfere with MPA's or other permitted users' use of the site and does not give rise to or cause or contribute to any damage to or persons on, about or around, the site.
- 1.14 The Charging Point Operator shall within 24 hours from the occurrence of any such damage to the site, provide written notification to MPA of the same. Any damage to the site (including the Licensed Area) or any other part of the site arising from any work carried out in relation to the Charging Point/s, or from the Charging Point Operator's use of the site (including the Licensed Area), or any activity consequent or incidental to such use shall, where required by MPA, be rectified to MPA's satisfaction and be at the Charging Point Operator's own cost and expense.
- 1.15 If the Charging Point Operator fails to undertake repair works or make good such damage where so required by MPA within a week or such period that may be agreed with MPA, MPA may proceed to effect such remedial works, the cost of which shall be a debt due from the Charging Point Operator to MPA and be payable by the Charging Point Operator. If incurred, the debt shall be payable to MPA within 30 business days. If the debt is not paid within the said 30 business days in full, interest shall accrue daily at a rate of 1% per month calculated on a daily basis from the date on which such money(s) fall due for payment to the date when such money(s) are paid to MPA in full.

Tools, Materials and Supplies

- 1.16 All tools, equipment, materials, and supplies necessary to perform the installation, operation, maintenance, service, repair, replacement, and removal of the Charging Point/s and the supply of electrical power to electrified harbour craft shall be provided by the Charging Point Operator.
- 1.17 The Charging Point Operator shall maintain in its custody supplies and materials needed for carrying out the required Permitted Use in quantities adequate for the uninterrupted performance of the installation, operation, maintenance, service, repair, replacement, and removal of the Charging Point/s and supply of electrical power to electrified harbour craft.

Emergency Preparedness

- 1.18 The Charging Point Operator shall provide to MPA a written report on the emergency, including the nature and cause of the emergency and the actions taken to respond to the emergency, within twenty-four (24) hours of such emergency access.
- 1.19 All work carried out for the purposes of responding to an emergency shall be diligently executed to completion and must not remain in an unfinished condition for longer than is necessary for completion.

Licensed Area

Insurance

- 1.20 During the term, the Charging Point Operator shall, at its sole cost and expense, keep in force the following insurance policies with an insurance company or companies nominated or approved by MPA:-
- 1.20.1 in the joint names of MPA and the Charging Point Operator, an insurance policy against all risks and damage to the fixtures and fittings of the Licensed Area and all parts thereof which the Charging Point Operator is obliged to keep in repair in such amounts as may from time to time be specified by MPA;
- 1.20.2 in the joint names of MPA and the Charging Point Operator, a comprehensive general liability insurance policy which is to be taken out in respect of the Licensed Area, against claims for personal injury death or property damage or loss arising out of the Permitted Use of the Licensed Area of an amount not less than **One Million Dollars [S\$1,000,000]** in respect of any one occurrence; and
- 1.20.3 in the name of the Charging Point Operator, insurance against all risks and damage in respect of the Charging Point Operator's property and equipment for the replacement value thereof and the Charging Point Operator agrees and undertakes that upon receipt of any payment under this sub-clause, the Charging Point Operator shall utilise such payment solely for the purpose of replacing the Charging Point Operator's damaged property or equipment with property and equipment of equivalent or better value and quality to that for which the insurance money(s) were paid.
- 1.21 The Charging Point Operator shall, on written demand at any time by MPA, produce forthwith to MPA, any policy of insurance which the Charging Point Operator is required to effect hereunder and the receipt for the last premium payable in respect of such policy.

Avoidance of Insurance Policies

- 1.22 The Charging Point Operator shall not, at any time during the Term, do or permit or suffer to be done any act, manner or thing upon the Licensed Area whereby any policies of insurance in respect thereof may be vitiated or rendered void or voidable or whereby the rate of premium of any insurance policy shall be liable to be increased and to make good all damage suffered by MPA and to repay to the MPA all sums paid by it by way of increased premium and all expenses incurred by it in or about any renewal of such policy or policies rendered necessary by a breach or non-observance of this covenant.

Data Sharing

Collection and Sharing of Data with MPA

- 1.23 The Charging Point Operator shall at all times during the Term, collect and maintain all of the following data:

1.23.1 Real-time availability status of the Charging Point(s);

1.23.2 Charging session details, such as start and end times, energy consumed and the fees imposed for each charging session, including without limitation, the following;

- (i) eHC registration numbers and unique identifiers, and charging session history for each of its customers, including dates, times and duration of sessions;
- (ii) Charging preferences and settings, if available to its customers;
- (iii) Charging payment data such as transaction amounts and methods of payment by its customers;
- (iv) Charging infrastructure performance, including energy consumption and power tapped from the Site and efficiency metrics;
- (v) Maintenance and service records, including repairs, upgrades and inspections of the Charging Point(s) and/or the supply of electric power to customers;
- (vi) Fault reports and diagnostics data for troubleshooting purposes;
- (vii) Data on any technical issues or failures that may affect the operation of Charging Point/s;
- (viii) Software versions and updates deployed on the Charging Point/s;
- (ix) Any and all feedback received from both customers and non-users of the Charging Point/s;

- (x) Records of the costs the Charging Point Operator has to pay for all services incurred.
- 1.24 The Charging Point Operator shall install and maintain a standard revenue quality meter with electronic data acquisition system ("**DAS**") capabilities at each Charging Point. The meter shall measure the alternating current/direct current output of the Charging Point on a continuous basis. The Charging Point Operator shall be responsible for maintaining the metering equipment in good working order. In the event of a failure of the electronic meter reading system and until such failure has been corrected, the Charging Point Operator shall be responsible for conducting monthly on-site readings of the standard electricity meter to determine the output of the Charging Point. Data retrieved from any such meter shall serve as the basis for invoicing the Charging Point Operator for all delivered energy.
- 1.25 The Charging Point Operator shall preserve all data compiled hereunder for a period of at least two (2) years from the expiry or sooner determination of the Term.
- 1.26 The Charging Point Operator shall throughout the Term, submit to MPA, all data listed under Clause 1.23 hereto and Paragraph 3.14 of the TOR, on a monthly basis.
- 1.27 At MPA's request, the Charging Point Operator shall attend and contribute to ad-hoc sharing sessions with working groups on the development of the National eHC Charging Infrastructure Standards and the National eHC Charging Infrastructure Master and Implementation Plan and other related implementation plans.

General

General Obligations

- 1.28 The Charging Point Operator shall within 05 days from the occurrence of any of the following events, notify MPA in writing when:
 - a. the Charging Point Operator undertakes or commences any action or files any documents for its dissolution, applies for insolvency or bankruptcy; or otherwise admits in writing its inability to pay its outstanding financial obligations;
 - b. the Charging Point Operator is likely to be administratively or judicially declared insolvent or bankrupt; placed under receivership, administration, rehabilitation or liquidation;
 - c. the Charging Point Operator's financial condition becomes unstable to the point where it affects the Charging Point Operator's ability to perform its obligations;

- d. the Charging Point Operator loses any license or authorisation required for it to perform its obligations; or
 - e. the Charging Point Operator faces any event, whether beyond its control or otherwise, that makes it impossible for the Charging Point Operator to continue carrying out its obligations.
- 1.29 The Charging Point Operator shall ensure that any activity undertaken pursuant to or in connection with the CFP, the Permitted Use, the Charging Points and/or any performance of any of its obligations shall comply with all applicable laws, statutes, and regulations of Singapore.
- 1.30 All information provided by MPA to the Charging Point Operator in connection with the CFP and/or the agreement, shall be treated as strictly confidential and the Charging Point Operator shall not disclose it to a third party for any reason whatsoever, unless with the prior written consent of MPA.
- 1.31 The Charging Point Operator agrees to indemnify, protect, defend and hold harmless MPA, its employees, officers, and agents against all claims, demands, actions, proceedings, suits, losses, damages, costs (including legal costs on a full indemnity basis), expenses and all liabilities whatsoever suffered or incurred by MPA arising out of or in connection with the Permitted Use, the Charging Points, the Charging Point Operator's supply or delivery of electrical power to its customers, including but not limited to, the performance or non-performance of any agreement with its customers, the use of the Charging Points, the supply and delivery of electrical power by the Charging Point Operator, the Charging Point Operator's access to and use of the Licensed Area, and any representations made or any claim of infringement or alleged infringement of intellectual property in respect of the same.
- 1.32 MPA shall have the right from time to time, through its Audit Agents, to conduct ad-hoc audits (whether on-site or otherwise) to ensure that the terms of the agreement are being or were met and that all reports and all information submitted to the MPA by the Charging Point Operator are accurate, correct and not misleading.