

Corrigendum 1 - Amendments

27th June 2021

Reference - This corrigendum has been issued for NIT No : AEML/MDB/2021-22/32
 With Reference to the above, the corrigendum 1 to the aforementioned Tender is hereby issued and relevant modification (s) / addition (s) / deletion (s) / clarification (s) are follows:

Sr.No.	Clause No / Page No	Existing Clause	Amended/Added Clause
1	Advertisement		
1.1	Estimated Cost	Estimated Cost– 162 Cr	Amended Estimated Cost – 197 Cr
2	NIT Document		
2.1	T3 Qualification Criteria of NIT Document	Bidder(s) should have been successfully supplied / deployed a minimum of 100 units for EV Chargers (slow and Fast) or deployed & integrated CPMS in India or overseas during the last 5 years.	Amended Bidder(s) should have been successfully supplied / deployed a minimum of 50 units for EV Chargers (slow and Fast) or deployed & integrated CPMS in India or overseas during the last 5 years.
2.2	T4 Qualification Criteria of NIT Document	-	Added Bidder(s) proposing solution other than OCPP for eBike Charger should successfully demonstrate core functionalities (Charging Start/Stop through Mobile App, Secured communication with CPMS, User Authentication) of eBike Charger and CPMS within 1 month after submission of Bids.
2.3	B of 3.3.1 of NIT Document	Envelope-II shall contain (To be submitted Online)	Added Detailed Solution Architecture offered by bidder including details & design of the proposed system(s) to address the work requirement together with its capabilities. It shall include modules/components of proposed system and description of the technical solution for achieving the integrations.
2.4	7.1 of NIT Document	Project Delivery Schedule	Amended / Added Refer Corrigendum 1 Annexure A
2.5	2 l' of 6 of NIT Document	The maintenance of this complete Canopy and system under the FMS	Clause Removed

Sr.No.	Clause No / Page No	Existing Clause	Amended/Added Clause
		period shall be comprehensive, as set forth herein, in nature and would broadly include but shall not be limited to diagnosis, troubleshooting and rectification of hardware, software and other system failures in the scope of the seller.	
2.6	2 (g) of 6 of NIT Document	The buyer shall submit the report details and format along with the proposal for approval of the buyer.	Clause Removed
2.7	2(i) of 6 of NIT Document	The successful bidder shall provide asset tracking services during the FMS period.	Clause Removed
2.8	2.2.11 of NIT Document	Digital Signature Certificate: It is mandatory for all the bidders to have class-III Digital Signature Certificate (DSC) with signing and Encryption certificate (in the name of person who will sign the BID) from any of the licensed Certifying Agency (Bidders can see the list of licensed CAs from the link www.cca.gov.in) to participate in e-tendering of AEML.	Added Bidders may submit the bid using DSC or scanned signed and stamped document
3	Annexure I - Electric Vehicle Supply Equipment		
3.1	9.4.1 of Annexure I	Display and Touch Screen Size is minimum 7 inches with 720x480 pixels TFT	Amended Display and Touch Screen Size is minimum 4 or 7 inches with 720x480 pixels TFT for DC Fast Charger and AC Fast Charger Only
3.2	5 of Annexure I	Slow Charger Technical Parameters	Amended Refer Corrigendum 1 Annexure B
3.3	6 of Annexure I	30 Kw Bharat Charger Dc 002	Amended "Bharat DC 30 KW : 2 X GB/T connector of 15KW each"

Sr.No.	Clause No / Page No	Existing Clause	Amended/Added Clause
3.4	6 of Annexure I	Output Voltage for "Bharat DC 30 KW : 2 X GB/T connector of 15KW each" – 40-100V DC	Amended Output Voltage for "Bharat DC 30 KW : 2 X GB/T connector of 15KW each" – 40-120V DC
3.5	14, 19, 20.2, 21.6, 22.1 and 22.2 of Annexure I	EVSE with ARAI Certification	Amended EVSE with ICAT / ARAI / Certification
3.6	25.3 of Annexure I	Failure of power supply: Battery backup for minimum 1 hour for the control system and billing unit. Data logs should be synchronized with. CMS during back up time, in case battery drains out.	Amended Failure of power supply in case of DC Fast Chargers : Battery backup for minimum 1 hour for the control system and billing unit. Data logs should be synchronized with. CMS during back up time, in case battery drains out.
3.7	11.2 of Annexure I	The EVSE shall be provided with GSM-4G communication for EVSE to communicate with CPMS. The GPRS services shall be provided by the successful bidder during the warranty and AMC period.	Amended The EVSE shall be provided with 4G/LTE communication for EVSE to communicate with CPMS. The GPRS services shall be provided by the successful bidder during the warranty and AMC period. 4G/LTE SIMs on private APN shall be provided by AEML
3.8	10.3.1 of Annexure I	10.3.1. Metering: Grid responsive metering as per unit consumption of the vehicle. Both the AC & DC outputs shall be metered separately.	Amended 10.3.1. Metering: Grid responsive metering on AC side (incoming supply side) to record electricity consumption of Connectors separately.
3.9	14 of Annexure I	The EVSEs shall conform to the Bharath Standards, IEC/IS standards and be type tested at any of the ARAI certified, International laboratories respectively for various safety, electrical & mechanical requirements as per the standards	Amended The EVSEs shall conform to the Bharath Standards, IEC/IS standards and be type tested at any of the ARAI / ICAT certified, International laboratories respectively for various safety, electrical & mechanical requirements as per the standards
3.10	15.2 of Annexure I	AEML will ensure availability of electricity connection (upto Smart Meter) including	Amended AEML will ensure availability of feeder at HT and LT level. Vendor to

Sr.No.	Clause No / Page No	Existing Clause	Amended/Added Clause
		Substation and availability of LDB for installation of multiple Charger at one location.	coordinate on behalf of AEML with Utility for New Connection. Payment related to New Connection and Security Deposit shall be in the scope of AEML. SITC of substation, LT distribution panel and Cable laying upto EV SLD
3.11	17 & 18 of Annexure I	Smart Meters: The EVSE shall be provided with Energy Meters for measurement of Electrical Energy Consumption. Smart Energy Meter shall comply with the applicable IS13779, IS15959:2017 (part 3) standards with Class 1S accuracy and shall be tamper proof complying with IP55 rating. The type test certificates shall be submitted along with the GTP for approval. The same shall be verified by AEML during the pre-dispatch 1 5 inspection and the testing shall be arranged by the bidder at meter manufacturer facility/ NABL accredited laboratories.	Amended Energy Meter: The EVSE shall be provided with Energy Meters for measurement of Electrical Energy Consumption. Energy Meter shall comply with the applicable IS13779, IS15959:2017 (part 3) standards with Class 1S accuracy and shall be tamper proof complying with IP55 rating. The type test certificates shall be submitted along with the GTP for approval. The same shall be verified by AEML during the pre-dispatch 1 5 inspection and the testing shall be arranged by the bidder at meter manufacturer facility/ NABL accredited laboratories.
3.12	10.2 of Annexure I	Vehicle Identification Number (VIN) Additional changes are as given in Annex B3 of Bharath DC-001 specifications stipulated in the Committee report published by Gol.	Clause Deleted
3.13	27.1 of Annexure I	-	Added All Spares and Consumables required to repair the EVSE under AMC are in scope of Bidder.
4	Annexure II - Annexure II - Charge Point Management System OCPP		

Sr.No.	Clause No / Page No	Existing Clause	Amended/Added Clause
4.1	Section 2 of Annexure II	Proposed Architecture diagram	Amended Refer Corrigendum 1 Annexure C
4.2	4.1 (a) of Annexure II	Emergency Alerts and Voice Notification in case of low SoC	Clause Removed
4.3	4.1 (h) of annexure II	Service Management assistance	Clause Removed
4.4	4.1 (k) of annexure II	Intelligent Load Management	Clause Removed
4.5	4.2 (b) of Annexure II	CCTV surveillance Notification and Power Theft Notification	Clause Removed
4.6	4.3 (e) of Annexure II	Sensor Data - Parking sensors for getting CP slot occupancy information	Clause Removed
4.7	Section 5 of Annexure II	-	Added Refer Corrigendum 1 Annexure D for detailed integration touchpoints
D4.8	5.2 (c)' of Annexure II	Charging Station Vendors can offer innovative payment schemes/discounts using multiple online payment options to increase revenue	Amended AEML can offer innovative payment schemes/discounts using multiple online payment options to increase revenue
4.9	5.4 (a) of Annexure II	Energy consumption, billing & collection information of each & every Charging Point corresponding to individual energy meter will be tracked/managed in AEML billing system	Amended Energy consumption, billing & collection information of each & every Charging Point corresponding to individual energy meter will be tracked/managed in AEML billing system. CPMS side integration shall be carried out by Vendor whereas SAP end integration work will be carried out by AEML. CPMS-SAP integration & associated business workflow requirement shall be discussed in detailed during requirement analysis phase.
4.10	5.5 of Annexure II	Charging Point Management System – VAHAN Portal	Clause removed
4.11	5.6 of Annexure II	.Charging Point Management System – OEM	Clause removed

Sr.No.	Clause No / Page No	Existing Clause	Amended/Added Clause
4.12	5.8 of Annexure II	EV CPMS – Energy Management /SCADA	Clause removed
4.13	6.2 of Annexure II	Enable VIN based vehicle authentication model to ensure only authenticated users and associated vehicles can use the system.	Clause removed
4.14	12.3 of Annexure II	Proposed CPMS should be a COTS (Commercial-off-the-Shelf) software product having successful operations in minimum three (03) National / International entities with installed base of at least 1000 EV Charging Points	Amended Proposed CPMS should be a COTS (Commercial-off-the-Shelf) software product having successful operations in minimum one (01) National / International entities with installed base of at least 50 EV Charging Points
4.15	12.4 of Annexure II	Proposed CPMS should have cumulative installed base of 1000 EV Charging Points in past 5 years. Copy of client testimonials to be submitted	Clause removed
4.16	12.5 of Annexure II	OEM should have experience of proposed CPMS solution implementation and integration with SAP in two utilities for at least 100 EV Charging Points. Copy of client testimonials to be submitted	Clause removed
4.17	12.6 of Annexure II	OEM should have experience of integrating it with GIS, SCADA/DMS,AMI, OMS, Customer Web portal & Mobile App etc. Copy of client testimonials to be submitted	Clause removed
4.18	12.7 of Annexure II	12.6 of 12 of Annexure II	Clause Removed
5	Annexure III - Charge Point Management System eBikes		
5.1	Section 2 of Annexure III	Proposed Architecture diagram	Added Refer Corrigendum 1 Annexure E
5.2	Section 5 of Annexure III	-	Added

Sr.No.	Clause No / Page No	Existing Clause	Amended/Added Clause
			Refer Annexure Corrigendum 1 Annexure F for detailed integration touchpoints
5.3	12.3 of Annexure III	Proposed eB-CPMS should be a COTS (Commercial-off-the-Shelf) software product having successful operations in minimum three (03) National / International entities with installed base of at least 500 e-Bike Charging Points	Amended Proposed eB-CPMS should be a COTS (Commercial-off-the-Shelf) software product having successful operations in minimum One (01) National / International entities with installed base of at least 20 e-Bike Charging Points
5.4	12.4 of Annexure III	Proposed eB-CPMS should have cumulative installed base of 500 e-Bike Charging Points in past 5 years. Copy of client testimonials to be submitted	Clause Removed
5.5	12.5 of Annexure III	Proposed eB-CPMS should have cumulative installed base of 500 e-Bike Charging Points in past 5 years. Copy of client testimonials to be submitted	Clause Removed
5.6	12.6 of Annexure III	OEM/SI should be CMMi Level 3 or above	Clause Removed
6	Annexure IV - Scope of Work for EV Slow charger and Fast Charging Stations		
6.1	2.2.1 of Annexure IV	-	Added Illustrative SLD for HT & LT Connection – refer Annexure Corrigendum 1 Annexure G
6.2	2 of Annexure IV	-	Added AEML envisaged following strategy for CPMS 1) CPMS on OCPP protocol to manage EV slow and fast charger. Though AEML has asked bidders to submit the CPMS proposal for Part1 and Part2 package of the bid , AEML may decide to go for one CPMS to manage slow as well as fast charger depending upon

Sr.No.	Clause No / Page No	Existing Clause	Amended/Added Clause
			solution offered by bidders and financial/technical evaluation. 2) CPMS on HTTP protocol for eBike chargers – This is proposed separately with the objective of having low cost solution for CPMS for eBike chargers (i.e. Smart Sockets)
6.3	2.1.7.3 (h) of Annexure IV	EV Charger should be installed so that any socket-outlet of supply is at least 800m above the finished ground level	Amended EV Charger should be installed so that any socket-outlet of supply is at least 1m above the finished ground level
6.4	2.1.7.4 (5.6) of Annexure IV	Handover the recovered meter to Depot Incharge.	Clause Removed
6.5	2.2.4.2.a of Annexure IV	RCC / PCC Foundation	Refer Corrigendum 1 Annexure H for RCC/PCC Foundation of PSS
7	Annexure V_Price Bid Format		
7.1	1.1, 1.2 1.3, 3.1 and 3.2 of Part 1 of Annexure V	-	Added Bidders to share the per annum cost towards subscription cost for 7 Years during financial evaluation
7.2	1.1, 1.2 1.3 of Part 2 of Annexure V	-	Added Bidders to share the per annum cost towards AMC, FMS for 10 Years during financial evaluation
7.3	3.1 of Part 2 of Annexure V	Electricity Connection & Security Deposit (EVCS in AEML, BEST & MSEDCL Licensed area)	Item deleted. AEML will pay the Electricity Connection & Security Deposit. Refer Corrigendum 1 Annexure J for revised Price bid Format
7.4	1.1 of Part 2 of Annexure V	Combo Charger 52 KW : 1 X CCS (30 KW) Connector and 1 X Type 2 AC (22 kW) connector (including 10 years AMC, FMS, Support) – Qty 280 Nos	Amended Combo Charger 52 KW : 1 X CCS (30 KW) Connector and 1 X Type 2 AC (22 kW) connector (including 10 years AMC, FMS, Support) – Qty 00 Nos. Refer Corrigendum 1 Annexure J for revised Price bid Format
7.5	2.1 of Part 2 of Annexure V	Combo Charger 52 KW : 1 X CCS (30 KW) Connector and 1 X Type 2 AC (22 kW) connector– Qty 280 Nos	Amended Combo Charger 52 KW : 1 X CCS (30 KW) Connector and 1 X Type 2 AC (22 kW) connector– Qty 00 Nos.

Sr.No.	Clause No / Page No	Existing Clause	Amended/Added Clause
			Refer Corrigendum 1 Annexure J for revised Price bid Format
7.6	1.2 of Part 2 of Annexure V	Combo Charger 72 KW : 1 X CCS (50 KW) Connector and 1 X Type 2 AC (22 kW) connector (including 10 years AMC, FMS, Support) – Qty 40 Nos	Amended Combo Charger 72 KW : 1 X CCS (50 KW) Connector and 1 X Type 2 AC (22 kW) connector (including 10 years AMC, FMS, Support) – Qty 320 Nos . Refer Corrigendum 1 Annexure J for revised Price bid Format
7.7	2.2 of Part 2 of Annexure V	Combo Charger 72 KW : 1 X CCS (50 KW) Connector and 1 X Type 2 AC (22 kW) connector– Qty 40 Nos	Amended Combo Charger 72 KW : 1 X CCS (50 KW) Connector and 1 X Type 2 AC (22 kW) connector– Qty 320 Nos . Refer Corrigendum 1 Annexure J for revised Price bid Format
7.8	1.3 and 2.3 of part 2 of Annexure V	Items having Description as “Bharat DC 30 KW : 1 X GB/T connector”	Amended Items having Description as “Bharat DC 30 KW : 2 X GB/T connector of 15KW each” . Refer Corrigendum 1 Annexure J for revised Price bid Format
7.9	3.1 of Part 1 of Annexure V	Subscription based Software – Charger Management System with OCPP protocol along with Mobile App. On cloud System with operating system, storage, Data base & servers with DR system, integration and 7 Yrs AMC, Support	Amended Subscription based Software (7 year licensing for Cloud services under SaaS model) – Charger Management System (OCPP protocol - 4W), Mobile Apps. Web Applications , DR system, Integrations and yearly operation, FMS, AMC, Support services (including managed services cost) . Refer Corrigendum 1 Annexure J for revised Price bid Format
7.10	3.2 of Part 1 of Annexure V	Subscription based Software – Charger Management System with HTTP protocol along with Mobile App. On cloud System with operating system, storage, Data base & servers with DR system, integration and 7 Yrs AMC, Support	Amended Subscription based Software (7 year licensing for Cloud services under SaaS model) – Charger Management System (IOT/OCPP protocol - 4W), Mobile Apps. Web Applications , DR system, Integrations and yearly operation, FMS, AMC, Support services

Sr.No.	Clause No / Page No	Existing Clause	Amended/Added Clause
			(including managed services cost). Refer Corrigendum 1 Annexure J for revised Price bid Format
7.11	3.1 of part 2 of Annexure V	Charger Point Management System (CPMS) – Charger Onboarding Cost	Amended Charger Point Management System (CPMS) – One time Charger Onboarding Cost (including cloud services set-up cost, migration services). Refer Corrigendum 1 Annexure J for revised Price bid Format
7.12	3.3 of part 2 of Annexure V	CPMS per unit operational cost to manage the EV Charging Station (Including Charger Management System with operating system, storage, Data base & servers with DR system, backhaul, integration) – Bidders to quote rate for 10 Yrs	CPMS Operational cost (per unit cost of electricity sale) to manage the EV Charging Station (Including Charger Management System with Mobile Apps. Web Applications, DR system, , Integrations and yearly operation, FMS, AMC, Support services (including managed services cost) . – Bidders to quote rate considering sale of electricity for 10 Yrs. Refer Corrigendum 1 Annexure J for revised Price bid Format
7.13	3.2 of part 2 of Annexure V	-	Added Prices quoted by bidder shall be valid for minimum 50% of BOQ. Refer Corrigendum 1 Annexure J for revised Price bid Format
7.14	Point no.27 of 3.2.2 of Part II of Annexure V	Installation, Testing & Commissioning of 400 A AC Distribution PANEL including loading, unloading & transportation to work site.	Amended Supply, Installation, Testing & Commissioning of 400 A AC Distribution PANEL including loading, unloading & transportation to work site. Refer Corrigendum 1 Annexure J for revised Price bid Format
7.15	Point no.28 of 3.2.2 of Part II of Annexure V	Supply, Installation, Testing & Commissioning of 850VA INVERTER and 150 AH BATTERY including loading, unloading & transportation to work site.	Clause Removed. Refer Corrigendum 1 Annexure J for revised Price bid Format

Sr.No.	Clause No / Page No	Existing Clause	Amended/Added Clause
7.16	35 of 3.2.2 of Annexure V	Lighting panel	Refer Corrigendum 1 Annexure I for Lighting Panel

Corrigendum 1 Annexure A :

7.1 Project Delivery Schedule:

The delivery and implementation timeline for entire project would be a key yardstick in the selection criteria of suitable partner / vendor.

S.N.	Project Milestone	Time Duration for completion
1	Overall project Execution	
1.1	Business Requirement document signoff	Within 4 weeks
1.2	Design, Development & Integration of CPMS with other IT systems	Within 36 weeks*
1.3	Overall Project completion duration	Within 3 Years

*Refer Corrigendum 1 Annexure D and Corrigendum 1 Annexure F for CPMS Integration touchpoints and touchpoints wise delivery Durations.

The tentative delivery plan for Slow and fast chargers (after award of contract) is as follows:

- 20% - during 1st year
- 40% - during 2nd year
- 40% - during 3rd year

Detailing further about delivery plan - Bidders need to deploy ~ 140 to 280 EV slow charger per month and ~ 6 to 12 Fast chargers per month. AEML & selected bidder shall mutually agree monthly & yearly material supply schedule.

Timelines to deploy one slow charger - AEML will issue written communication for each location

S.N.	Project Milestone / activity	Time Duration for to complete activity
2.1	Site feasibility Survey	Within 3 Days
2.2	Supply of EV Supply Equipment (EVSE)*	Within 4 weeks
2.3	Installation, Testing & Commissioning & Integration	Within 2 Weeks
2.4	UAT (User Acceptance Testing) & Go Live	Within 2 Weeks

Timelines to deploy one EV Fast Charging Station - AEML will issue written communication for each location

S.N.	Project Milestone	Time Duration for completion
3.1	Site feasibility Survey	Within 1 Week
3.2	Supply of EV Supply Equipment (EVSE) and HT / LT network Equipments	Within 6 weeks
3.3	Installation, Testing & Commissioning	Within 4 Weeks
3.4	Integration of CPs with CPMS	Within 2 Weeks

S.N.	Project Milestone	Time Duration for completion
3.5	UAT (User Acceptance Testing) & Go Live	Within 2 Weeks

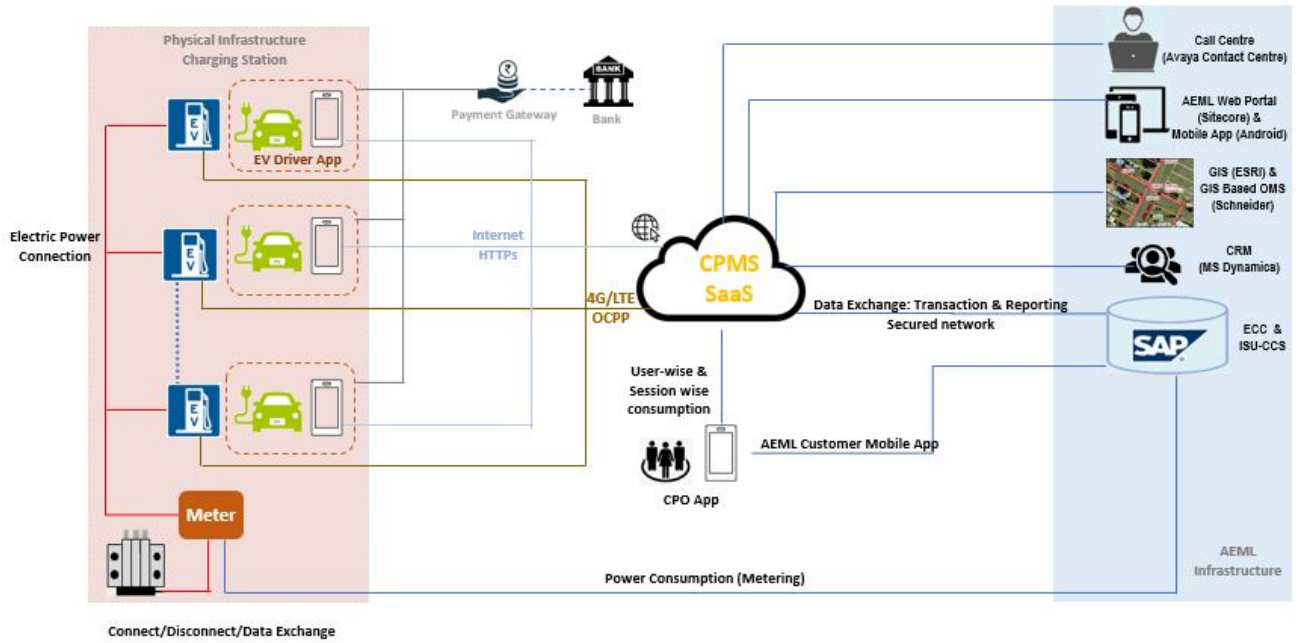
Corrigendum 1 Annexure B

Slow Charger Technical Parameters

Sr.No	Technical Detail	EV Charger with 1 X 7.4 kW Type 2 Connector	EV Charger with 1X32 A Industrial Socket	EV Charger with 1X16 A Industrial Socket
14	Communication	4G / LTE		Bluetooth / WiFi / 4G
15	Efficiency	Greater than 99%		
18	Protection	Over current, Under voltage, Over voltage, Residual Current, Surge protection, Short circuit, Over temperature, Ground fault, Communication failure	Over current, Residual Current, Short circuit	
21	Communication Protocol	OCPP 1.6 or above		IoT / OCPP
22	Authentication	RF Card & Mobile App (QR Code)		Bluetooth & Mobile App (QR Code / OTP)

Corrigendum 1 Annexure C
2. Solution Overview – Proposed Architecture

Fast Charger System Architecture



Corrigendum 1 Annexure D
Integration touchpoints for OCPP CPMS

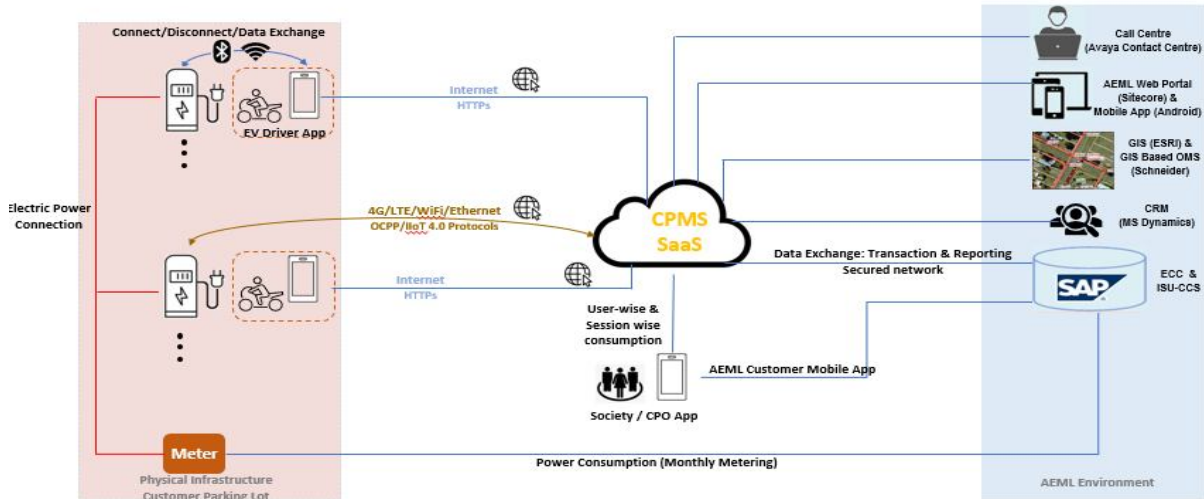
Integration#	System1	System2	Description / Features	Scope Remarks	Delivery Duration
1	EV User MobileApp (Android & iOS)	CPMS	<ul style="list-style-type: none"> i) New EV User registration process ii) EV users MobileApp will be authenticated and authorized to connect CPMS system iii) Exchange information availability/status of charging point location iv) Show/Route to nearest charging point location v) Request for charging slot / session vi) View Actual / Forecast Billing/Consumption vii) Request for Start / Stop Charging viii) EV User alerts & Reporting ix) Making Payment 	In Scope	Within 12 Weeks
2	EV Charging Point	CPMS	<ul style="list-style-type: none"> i) Authentication & Authorization of EV Charging Point in CPMS ii) Exchange information: transactional data (including previous charging sessions that are pending to be synced with CPMS) - Charging Point identity, location, charging time and duration, charge sessions by hour, kilowatts consumed, Charging events/alarms/notifications, and average charge times etc. iii) Availability/status of charger iv) Activate / Deactivate CP for maintenance / alarm situation v) Push Configuration settings of the charger/ Firmware update over air into EV Charger. 	In Scope	Within 12 Weeks

Integration#	System1	System2	Description / Features	Scope Remarks	Delivery Duration
3	EV User Web Application	CPMS	i) New EV User registration process ii) Authentication of EV user with CPMS iii) Availability/status of charger and its booking in advance iv) EV User alerts & Reporting v) Billing and Consumption vi) Making Payment	In Scope	Within 12 Weeks
4	CPMS	AEML SAP ISU-CCS,	Exchange Information - Energy consumption, billing & collection information of each & every Charging Point/s corresponding to individual energy meter (AEML Customer).	In Scope	Within 12 Weeks
5	EV Charger	CPO MobileApp	i) Scanning of QR code on Charger to initiate User authorization & charging Operation.	In Scope	Within 12 Weeks
6	EV User MobileApp (Android & iOS)	AEML MobileApp (Existing)	Embedding EV User MobileApp functionalities in AEML's customer MobileApp (existing)	In Scope	Within 36 Weeks
7	CPO MobileApp	CPMS	i) New CPO & EV user registration process ii) Availability/status/Alerts/ Notifications of CPO's charger iii) CPO alerts & Reporting iv) Request for Maintenance / Activities to be carried out at Charging Point	In Scope	Within 12 Weeks
8	CPO MobileApp	AEML MobileApp (Existing)	Embedding CPO MobileApp functionalities in AEML's customer MobileApp (existing)	In Scope	Within 36 Weeks
9	CPMS WebApp	AEML Web Portal	For seamless navigation to AEML Portal	In Scope	Within 36 Weeks
10	CPO Web App	CPMS	i) New CPO & EV user registration process ii) Availability/status/Alerts/ Notifications of CPO's charger iii) CPO alerts & Reporting iv) Request for Maintenance / Activities to be carried out at Charging Point	In Scope	Within 36 Weeks

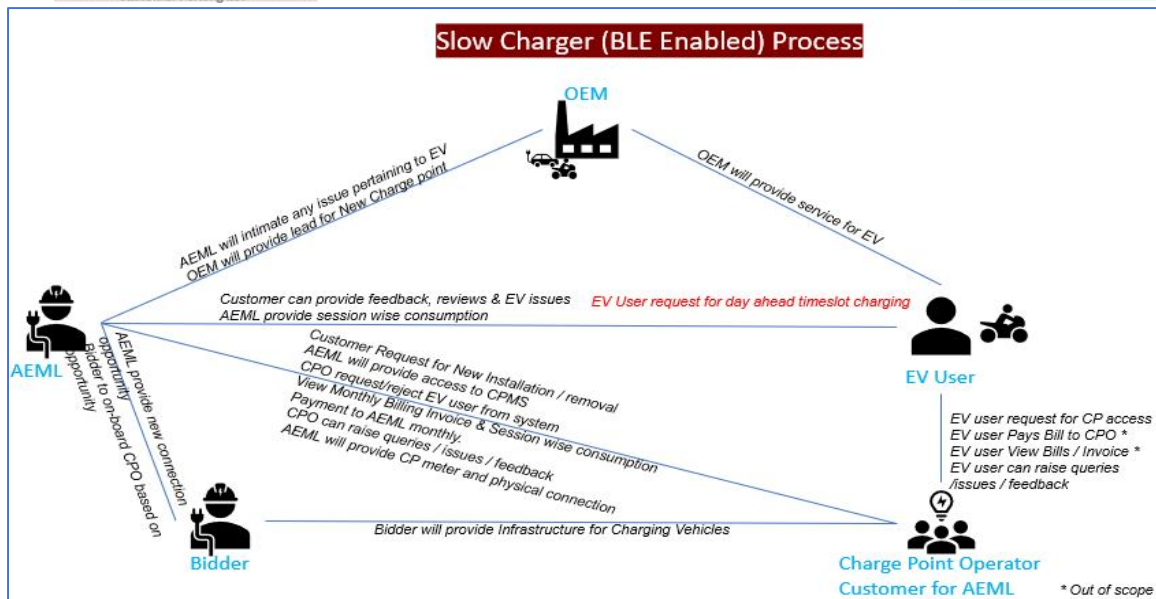
Integration#	System1	System2	Description / Features	Scope Remarks	Delivery Duration
11	CPMS	Active Directory (AEML)	Authentication mechanism to authenticate CPMS user	In Scope	Within 12 Weeks
12	CPMS	SSO (Single-Sign-On)	User authentication to access all modules of CPMS	In Scope	Within 12 Weeks
13	CPMS	Third Party Payment Gateway	Standard Online Payment related Process	In Scope	Within 12 Weeks
14	CPMS	SMS / EMAIL Gateway	Email & SMS Notification	In Scope	Within 12 weeks
15	CPMS	AEML CRM (MS Dynamics)	Data exchange with CRM as per Business Process	In Scope	Within 36 Weeks
16	CPMS	AEML ERP (SAP)	Asset Management as per Business Process	In Scope	
17	CPMS	AEML Call Center (Avaya Contact Centre)	Data exchange for Consumer Complaint Management	In Scope	
18	CPMS	GIS (ESRI & Schneider)	Data exchange for mapping of Assets on GIS, Exchange of information with OMS,	In Scope	

Corrigendum 1 Annexure E
2. Solution Overview – Proposed Architecture

Slow Charger System Architecture



Slow Charger (BLE Enabled) Process



Corrigendum 1 Annexure F
Integration touchpoints for IoT/OCPP CPMS for eBike Charger

Integration #	System1	System2	Description / Features	Scope Status	Delivery Duration
1	EV Charging Points	EV User MobileApp (Android & iOS)	<ul style="list-style-type: none"> i) EV users to connect MobileApp with EV Charging points using BLE/Wi-Fi/4G connectivity (Need mechanism to enable communication of specific charging point at site.) ii) Exchange information - transactional data (including previous charging sessions that are pending to be synced with CPMS) - Charging Point identity, location, charging time and duration, charge sessions by hour, kilowatts consumed, Charging events/alarms/notifications etc iii) Availability/status of charger iv) Push configuration settings of the charger/ Firmware update of air (using Mobile internet connectivity) into EV charger iv) Start & Stop Charging session. 	In Scope	Within 12 Weeks
2	EV User MobileApp (Android & iOS)	CPMS	<ul style="list-style-type: none"> i) New EV User registration process ii) Authentication of EV user through Mobile App integrated with CPMS iii) Exchange information: transactional data (including previous charging sessions that are pending to be synced with CPMS) - Charging Point identity, location, charging time and 	In Scope	Within 12 Weeks

Integration #	System1	System2	Description / Features	Scope Status	Delivery Duration
			duration, charge sessions by hour, kilowatts consumed, Charging events/alarms/notifications, etc iv) Show/Route to nearest charging point location v) Availability/status of charger vi) Push Configuration settings of the charger/ Firmware update over air (using Mobile internet connectivity) into EV Charger. vii) EV User alerts & Reporting		
3	EV User Web Application	CPMS	i) New EV User registration process ii) Authentication of EV user through Mobile App integrated with CPMS iii) Availability/status of charger iv) EV User alerts & Reporting	In Scope	Within 12 Weeks
4	CPMS	AEML SAP ISU-CCS	i) Exchange Information - Energy consumption, billing & collection information of each & every Charging Point/s corresponding to individual energy meter (AEML Customer).	In Scope	Within 12 Weeks
5	EV Charger	CPO MobileApp (for Societies/AEML)	i) Activate/Deactivate CP ii) Push Configuration settings of the charger/ Firmware update over air (using Mobile internet connectivity) into EV Charger	In Scope	Within 12 Weeks
6	EV User MobileApp (Android & iOS)	AEML MobileApp (Existing)	Embedding EV User MobileApp functionalities in	In Scope	Within 36 Weeks

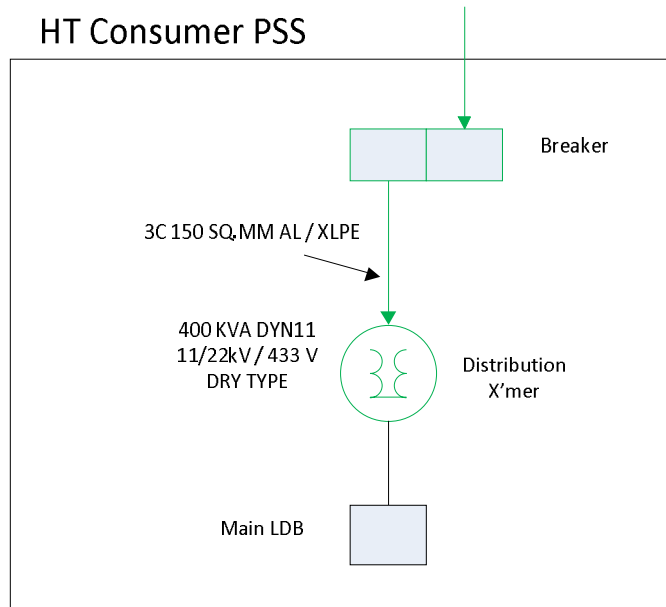
Integration #	System1	System2	Description / Features	Scope Status	Delivery Duration
			AEML's customer MobileApp (existing)		
7	CPO MobileApp (for Societies/AEML)	CPMS	i) New CPO & EV user registration process ii) Availability/status/Alerts/ Notifications of CPO's charger iii) Push Configuration settings of the charger/ Firmware update over air (using Mobile internet connectivity) into EV Charger iv) CPO alerts & Reporting	In Scope	Within 12 Weeks
8	CPO MobileApp (for Societies/AEML)	AEML MobileApp (Existing)	Embedding CPO MobileApp functionalities in AEML's customer MobileApp (existing)	In Scope	Within 36 Weeks
9	CPMS WebApp	AEML Web Portal	For seamless navigation to AEML Portal	In Scope	Within 36 Weeks
10	CPO Web App (for Societies/AEML)	CPMS	i) New CPO & EV user registration process ii) Availability/status/Alerts/ Notifications of CPO's charger iii) CPO alerts & Reporting	In Scope	Within 12 Weeks
11	CPMS	Active Directory (AEML)	Authentication mechanism to authenticate CPMS user	In Scope	Within 12 Weeks
12	CPMS	SSO (Single-Sign-On)	User authentication to access all modules of CPMS	In Scope	Within 12 Weeks
13	CPMS	SMS / EMAIL Gateway	Email & SMS Notification	In Scope	Within 12 weeks
14	CPMS	AEML CRM (MS Dynamics)	Data exchange with CRM as per Business Process	In Scope	Within 36 Weeks
15	CPMS	AEML ERP (SAP)	Asset Management as per Business Process	In Scope	
16	CPMS	AEML Call Center (Avaya)	Data exchange for Consumer Complaint Management	In Scope	

Integration #	System1	System2	Description / Features	Scope Status	Delivery Duration
		Contact Centre)			
17	CPMS	GIS (ESRI & Schneider)	Data exchange for mapping of Assets on GIS, Exchange of information with OMS,	In Scope	

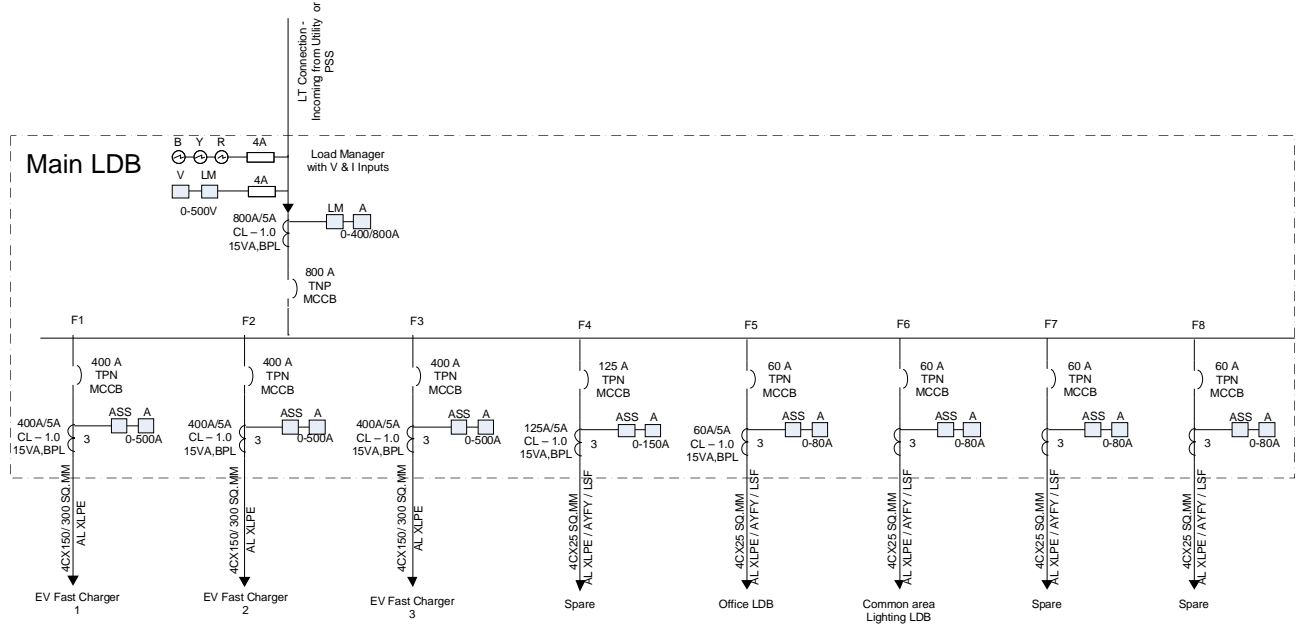
Corrigendum 1 Annexure G

1. Reference SLD for Substation

HT Incoming (11/22 kV) from Power Utility



2. Reference SLD for LT Distribution Panel in case of HT & LT Connection



*Note – In case of HT Connection, Main LTB shall be integral part of PSS

Corrigendum 1 Annexure I

