TRA24-02 - Supply and Delivery of Charging Equipment and Software for Electric School Buses - Specification - Level 2 Charging Station - Technical Specifications, Network Services + Installation

Line Item	Specifications	ChargeFWD Yes/No	Additional Information	EV Gateway Yes/No	Additional Information	FLO Services Inc Yes/No	Additional Information	Foreseeson Technology Inc. Yes/No	Additional Information	Guillevin International Yes/No	Additional Information
Technical Specifications											
1	The charging station is compatible with at least one of the electric buses outlined in the TRA 23-02 document - please specify which model/s	Yes		Yes	Manufacturer Name: Tellus Power Green & LiteOn Model 1) EVG-SC80A 2) EVG-IC80A 3) TP-EVVA-80A	Yes	The CoRe+MAX level 2 charging station is compatible with all electric buses outlined in the TRA 23-02.	Yes	CP6000 uses a SAE J1772 connector and therefore is compatible with the following vehicles according to their spec sheets: Micro Bird G5 LionC. The Bluebird Type C/D Jouley and IC Bus mention J1772 charging but we will need more information from the manufacturer to determine full compatibility. ChargePoint has successfully conducted testing at ChargePoint's interoperability lab in Campbell CA with Blue Bird IC Bus and Lion. ChargePoint's hardware and software tested successfully with the Thomas Built Jouley at the Daimler HQ electric island.	Yes	CP6000 uses a SAE J1772 connector and therefore is compatible with the following vehicles according to their spec sheets: Micro Bird G5 LionC. The Bluebird Type C/D Jouley and IC Bus mention J1772 charging but we will need more information from the manufacturer to determine full compatibility. ChargePoint has successfully conducted testing at ChargePoint's interoperability lab in Campbell CA with Blue Bird IC Bus and Lion. ChargePoint's hardware and software tested successfully with the Thomas Built Jouley at the Daimler HQ electric island.
2	Input Power Supply – 208V/240V 60Hz single phase	Yes		Yes		Yes		Yes		Yes	CP6000 supports 208/240V 60 Hz 1-phase AC input.
3	Minimum charging power of 19.2kW - please specify charging output capability	Yes		Yes		Yes	1.2 kW to 19.2 kW	Yes	CP6000 can provide 19.2 kW – 80 A @ 240 V – using a 100 A circuit breaker.	Yes	CP6000 can provide 19.2 kW – 80 A @ 240 V – using a 100 A circuit breaker.
4	Wall-mounted with mounting hardware provided	Yes		Yes		Yes		Yes	CP6000 has a wall mount option and includes all necessary mounting hardware.	Yes	CP6000 has a wall mount option and includes all necessary mounting hardware.
5	Capable of use 24 hours a day every day of the year in an Operating Temperature of 22F to 122F (-30C to +50C) and Operating Humidity of up to 95% @ 50C (122F) non-condensing	Yes		Yes		Yes		Yes	CP6000 can be used 24 hours a day and is rated with an operating temperature of -40 to 122 F. Please note an exception specific to operating humidity as the CP6000 is rated up to 85% at 122 F. Non-operating humidity tolerance up to 95% at 122 F.	Yes	CP6000 can be used 24 hours a day and is rated with an operating temperature of -40 to 122 F. Please note an exception specific to operating humidity as the CP6000 is rated up to 85% at 122 F. Non-operating humidity tolerance up to 95% at 122 F.
6	Weatherproof to minimum of NEMA 3	Yes		Yes		Yes		Yes	CP6000 is weatherproof rated to NEMA Type 3R.	Yes	CP6000 is weatherproof rated to NEMA Type 3R.
7	Connector compliance with Society of Automotive Engineers (SAE) Combined Charging System 1 (CCS1)	Yes	Level 2 stations use the J1772 socket	Yes		Yes	Confirmed. The SAE J1772 charging connector is the default industry accepted level 2 charging connector in	No	No. This is no possible for any AC Level 2 charger. The CP6000 is an AC charging station and as such utilizes SAE J1772 connector type. CCS Type 1 is used for DC fast charging.	No	No. This is no possible for any AC Level 2 charger. The CP6000 is an AC charging station and as such utilizes SAE J1772 connector type. CCS Type 1 is used for DC fast charging.
8	CSA cUL or other recognized certification approved for use in Canada	Yes		Yes		Yes		Yes	CP6000 is UL and cUL listed; complies with UL 2594 UL 2231-1 UL 2231-2and NEC	Yes	CP6000 is UL and cUL listed; complies with UL 2594 UL 2231-1 UL 2231-2and NEC Article 625
9	Charging station cord is a minimum of 5m in length. Please indicate other options available.	Yes	Level 2 stations cable length option are 16 18 25 ft.	Yes		Yes	The maximum cable length available for FLO's CoRe+ line of products is 7.62m (25	Yes	CP6000 is available in both 5.5 and 7 m cable lengths.	Yes	CP6000 is available in both 5.5 and 7 m cable lengths.
10	Over-current protection that prevents circuit breaker trips	Yes		Yes		Yes		Yes	CP6000 is installed with a 100 A circuit breaker on the electrical panel for overcurrent protection. CP6000 is equipped with surge protection of 6 kV @ 3000A. In geographic areas subject to frequent thunderstorms supplemental surge protection at the service panel is recommended.	Yes	CP6000 is installed with a 100 A circuit breaker on the electrical panel for overcurrent protection. CP6000 is equipped with surge protection of 6 kV @ 3000A. In geographic areas subject to frequent thunderstorms supplemental surge protection at the service panel is recommended.
11	Display must be liquid crystal display (LCD) light-emitting diode (LED) or equivalent and shall be readable in direct sunlight and at night.	Yes		Yes		Yes	All FLO commercial charging stations feature a small display screen that publishes	Yes	CP6000 includes an 8" touchscreen display although can be special ordered without a display is desired.	Yes	CP6000 includes an 8" touchscreen display although can be special ordered without a display is desired.
12	Must automatically continue to provide a charge to the electric school bus if station loses network connectivity or if remote station management system is offline.	Yes		Yes		Yes		No	CP6000 ensures charging can be continued at a safe default rate if network connectivity is disrupted.	Yes	CP6000 ensures charging can be continued at a safe default rate if network connectivity is disrupted.
13	Charging station must provide local data storage in the event of a network communication failure. All data automatically uploaded when connectivity is restored. Must have sufficient storage to hold at least 30 days of offline data.	Yes		Yes		Yes		Yes	CP6000 stores charge session data for up to 90 days and will upload to the cloud when network connectivity is restored.	Yes	CP6000 stores charge session data for up to 90 days and will upload to the cloud when network connectivity is restored
NETWORK SERVICES											
1	Station is capable of OCPP 1.6J or later governing communication between the station and the proposed network	Yes		Yes		Yes		Yes		Yes	ChargePoint CP6000 utilizes OCPP 2.0.1.

#	Requirement								
2	The following information and controls (at a minimum) are available from the charging station to be integrated with the Purchaser's charging management software: - Station identifer + location - Charging station status - Charging session start/stop times - Active charging time - kWh delivered - Charging station utilization/output (kW) - Error messages - Control functions Please indicate additional functionalities.	Yes	Access control load management Billing carbon reporting.	Yes	Yes	This data and much more can be provided. Please see uploaded documents for a sample of ou charging station data report. FLO's network architecture features a flexible API platform which can be leveraged to unlock EV charging features and share data seamlessly with third parties. The API platform enables bi-directional access to FLO's network architecture and various components including flexible billing module customer support OCPI roaming energy management services PCI-DSS payment services cybersecurity OCPP hardware interoperability testing and more.	Yes		Yes	ChargePoint charge management software can provide the listed functions and/or information. Control functions include the following allowing a user complete control to optimize fleet charging and electrical costs: •Access control •Dynamic power module allocation •Cable Sharing •Charge scheduling •Power Sharing Management: circuit panel and site levels •Plug and Charge •API •Fleet Integration (for telematics) For additional details please refer to Section 2.1 of the attached ChargePoint Solutions Overview.
3	Supports remote firmware upgrades	Yes		Yes	Yes		Yes		Yes	All ChargePoint products are networked via cellular connection and can be updated remotely.
4	Supplier is responsible for enabling cellular connectivity to a data network prior to shipping the unit(s) - please indicate proposed network	Yes	Bell / Twillo Super Sim (Roams on Telus Rogers Bell)	Yes	Yes	Telus or Bell within BC	Yes	Telus Rogers Bell networks are all supported.	Yes	All ChargePoint products utilize a private cellular network for security purposes; network activation is completed by ChargePoint or installer after commissioning. All ChargePoint stations are designed tested and confirmed to be seamlessly integrated with the ChargePoint charger management software.

Installation (Optional)

#	Requirement								
1	If providing installation services (optional) all work must be completed under appropriate permit and installation to meet Canadian electrical code requirements.	Yes	yes				Yes	Foreseeson has agreements in place for the installation of EVSE equipment by certified electrical contractors in all parts of Canada.	Yes	ChargePoint partner program - certified installers available all across British Columbia
2	Supplier must perform the testing and commissioning of the charging station including the successful charge of an electric school bus using each port so that they are functional and ready for use.	Yes		**OPTED OUT**	**OPTED OUT**		Yes	Testing and commissioning is included in our price.	Yes	CPSupport-activation covers the testing and activation of the software to ensure it works with the charger/buses. Doesn't require a site visit because we offer smart chargers and all handled remotely ChargePoint charges an activation fee for the startup and initial programming of the charging stations. AC Station Activation & Configuration Service includes activation of cloud services and configuration of radio groups custom groups connections access control visibility control pricing reports and alerts. Site Validation is an on-site service which assesses and verifies that the stations and make-ready have been installed to ChargePoint specifications. ChargePoint will deploy an O&M partner to validate electrical capacity transformers panels breakers wiring cellular coverage against ChargePoint and local code requirements. Site-validation is required for the optional Assure warranty to take effect.

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Line Item	Specifications	InCharge Energy Yes/No	InCharge Energy Additional Information	Lion Electric Co Yes/No	Lion Electric Co Additional Information	Powerflow Yes/No	Powerflow Additional Information	Wesco Distribution Canada Yes/No	Wesco Distribution Canada Additional Information
Technical Specifications									
1	The charging station is compatible with at least one of the electric buses outlined in the TRA 23-02 document - please specify which model/s	Yes	Yes all but the Jouley.	Yes	The Flo Core+ Max and Blink IQ-200 are compatible with all the electric buses with AC/DC charging. DC charging electric buses only won't be compatible with Level 2 chargers.	Yes		Yes	All models
2	Input Power Supply – 208V/240V 60Hz single phase	Yes		Yes		Yes		Yes	
3	Minimum charging power of 19.2kW - please specify charging output capability	Yes		Yes	Flo Core+ Max has an output capability of 1.2 kW to 19.2 kW Blink IQ 200 has an output capability of 2.9 kW to 19. KW	Yes	19.2kW	Yes	19.2kW
4	Wall-mounted with mounting hardware provided	Yes		Yes		Yes		Yes	
5	Capable of use 24 hours a day every day of the year in an Operating Temperature of 22F to 122F (-30C to +50C) and Operating Humidity of up to 95% @ 50C (122F) non-condensing	Yes		Yes		Yes		Yes	
6	Weatherproof to minimum of NEMA 3	Yes		Yes		Yes	Type 4	Yes	
7	Connector compliance with Society of Automotive Engineers (SAE) Combined Charging System 1 (CCS1)	No	No charging standard is J-1772.	Yes	Flo+ Core Max and Blink IQ 200 have a SAE J1772 charging connector.	Yes	1 x SAE J1772 Plug	No	SAE/CCS1 only relevant to level 3
8	CSA cUL or other recognized certification approved for use in Canada	Yes	All of our chargers are UL certified.	Yes		Yes	Yes CSA FCC Energy Star	Yes	
9	Charging station cord is a minimum of 5m in length. Please indicate other options available.	Yes	25ft cable available	Yes	Flo Core+ Max's cord is 5.5m and has a 7.62m option.	Yes	5M with optional 7.5M cable available.	Yes	7.6 m
10	Over-current protection that prevents circuit breaker trips	No		Yes		Yes		Yes	
11	Display must be liquid crystal display (LCD) light-emitting diode (LED) or equivalent and shall be readable in direct sunlight and at night.	Yes		Yes		Yes	4.3-inch LCD	No	Pro version has display that is compatible with requirements..
12	Must automatically continue to provide a charge to the electric school bus if station loses network connectivity or if remote station management system is offline.	Yes		Yes		Yes	Yes this is a config setting with ChargeUp software proposed.	Yes	
13	Charging station must provide local data storage in the event of a network communication failure. All data automatically uploaded when connectivity is restored. Must have sufficient storage to hold at least 30 days of offline data.	Yes	Our proprietary InControl software	Yes		Yes	8GB memory card	Yes	

NETWORK SERVICES

#	Requirement						
1	Station is capable of OCPP 1.6J or later governing communication between the station and the proposed network	Yes	All industry standard OCPP 1.6-J chargers can communicate with our software. Depending on the age of the equipment InCharge may still be able to connect to the charger network and capture charger session data that we can incorporate into dashboards and reports that are visible in the InControl software platform.	Yes	Yes	Yes	OCPP 1.6J
2	The following information and controls (at a minimum) are available from the charging station to be integrated with the Purchaser's charging management software: - Station identifer + location - Charging station status - Charging session start/stop times - Active charging time - kWh delivered - Charging station utilization/output (kW) - Error messages - Control functions Please indicate additional functionalities.	Yes	InCharge has built its own dealership management platform (InControl) designed to increase uptime and lower the cost to operate a fleet. The software is built with industry-leading security and reliability. It features multi-factor authentication and end-to-end encryption. The platform is designed for scalability of fleets facilities and vehicles with a GraphQL API that increases performance reliability and customization. InControl manages charging stations' access control usage data remote management network operations and advanced load management capabilities. The software reduces operating costs with remote service offerings over-the-air updates and energy management functions. Users can track service warranty and preventative maintenance. Additionally the software provides load management to reduce fleet total cost of operations (TCO) peak energy demand and can generate revenue from incentives and LCFS credits. It is OCPP compatible and interoperability tested with 10 different EV charging OEMs. InControl ensures a comprehensive delivery of services for users with features including but not limited to live session and charger data site yard layout energy and uptime reports real-time updates on charging activity state of charge & charging speed tracking access controls PIN/RFID load management policies automatic alerts of service events and support ticket creation and tracking. Importantly InControl also provides full ownership and control to our customers of their own data generated with an open API to allow integrations into other software platforms such as fleet or building management software accounting platforms or other. No other company in the industry provides this open API tool to our knowledge and certain companies in the industry are notorious for not providing customers access to their own data without paying fees.	Yes	Yes	Yes	Please refer to spec sheet for information you may be interested in.
3	Supports remote firmware upgrades	Yes		Yes	Yes	Yes	
4	Supplier is responsible for enabling cellular connectivity to a data network prior to shipping the unit(s) - please indicate proposed network	Yes	We are working with roaming SIM Cards which choose the strongest network.	Yes — The charger manufacturers are providing the connection to the network once the charger is ready for delivery. Flo Core+ Max is using Cellular 4G/LTE networks. Blink IQ 200 is using Cellular 2G 3G and 4G/LTE networks.	Yes — SIM Card and Data are provided as part of NovaCharge yearly subscription if purchaser opts to use their own software that provider would have to supply the SIM card and data.	Yes — Eaton charging network manager	

Installation (Optional)

#	Requirement						
1	If providing installation services (optional) all work must be completed under appropriate permit and installation to meet Canadian electrical code requirements.	Yes	To ensure complete execution of hardware and software offerings InCharge offers complete installation and commissioning assistance for all products. This includes site development engineering permitting and self-performance capabilities. Alternatively for our customers who are conducting their own make-ready infrastructure InCharge offers an installation service that completes the installation with a final installation / bolt down service that includes field commissioning to ensure the equipment is installed correctly and operational.			Yes — Wesco can provide installation service and full turnkey solutions. Pricing can be provided at the time of request by the end users.	

2	Supplier must perform the testing and commissioning of the charging station including the successful charge of an electric school bus using each port so that they are functional and ready for use.	Yes	InCharge requires a commissioning appointment once stations are installed. During the appointment the stations are tested to ensure they are installed to specifications before the stations can be fully energized. If an issue is found during the commissioning appointment that will be provided to the customer so their installer can rectify the issue.

Hardware is tested to be interoperable with OEM brands and models

Design and engineering is targeted toward low-cost serviceability and future planning

Software is integrated to service dispatch – allowing the technician to arrive with the right tools and parts to complete the job the first time

On-staff service technicians assure that when your chargers are down InCharge is not calling on another company with other customers in-line ahead of you

Software and hardware integration allows for optimizing performance and eliminating bugs.

Parts inventory and commissioning services in regional facilities allow fastest | **OPTED OUT** | **OPTED OUT** | Yes | Wesco can provide installation service and full turnkey solutions. Pricing can be provided at the time of request by the end users. |