

TRA25-03 - Charging Management Software - Technical Specifications

Line Item	Specifications	Bia Power Grid SL		Energy Network Services		Everegeri Software Consulting Limited		EV Gateway		Evlution Charge		Flipturn Inc.		Foreseeson Technology Inc.		Guilleivin International	
		Yes/No	Additional Information	Yes/No	Additional Information	Yes/No	Additional Information	Yes/No	Additional Information	Yes/No	Additional Information	Yes/No	Additional Information	Yes/No	Additional Information	Yes/No	Additional Information
1	Capable of integration with other manufacturers' charging equipment. Please indicate the manufacturers and models of charging equipment to which the software is compatible with.	Yes	Bia is compatible with any charging equipment that is OCPP compliant. Some examples are charging equipment we are currently integrated with are ABB Jema Circutor XCharge PowerElectronics Heliox EkoEnergetyka Alfen Schneider Electric Ingeteam Legrand Luobinsen Wallbox EVBox GoE Zappi plus many more.	Yes	Software compliant with other OCPP compliant hardware.	Yes	BetterFleet is continuously adding integration with charger companies. Currently our platform is integrated with ABB Heliox and Siemens. We are in the midst of integrating with Kempower and actively speaking to other charger companies. ABB Tritium Pihong (Zeroxa) Heliox Siemens Kempower Jema Hitachi Tellus Alpitronic	Yes	Yes	Yes	EVlution Network is compatible with all DCFC and Level 2 Chargers that are OCPP 1.6j or 2.0.1 compatible.	Yes	Flipturn is compatible with all EV Charging makes and models that support OCPP 1.6 and later including OCPP 2.0.1. The list below is continually being added to and other makes/models are being tested every week. Please contact support@getflipturn.com for information regarding specific OEMs that are not listed below. ABB Lite-On Alpitronic OpConnect Ampure Pihong Autel PII Blink Power Electronics Borg Warner Samsung BTC Sanki ChargePoint Schneider Electric ChargeTronix Siemens Delta SK (Atom Power) Eaton Tellus EvoCharge Tritium Fractal EV Vector Heliox Wallbox InCharge XCharge	Yes	In addition to manufacturing and selling our own EV charging equipment ChargePoint has over 8 years of experience integrating EVSEs from other manufactures onto our network. The ChargePoint Network supports the OCPP v1.6J and 2.0.1 protocol making it possible to integrate any charging station that communicates via the protocol onto our network. ChargePoint has developed a robust integration program with a dedicated team to facilitate this process to adequately conduct integration and ensure stations works as expected. Currently our portfolio of charge management software supports charging hardware from: ABB Alfen Alpitronics IES Eaton Ebusco Heliox Proterra Tritium and more.	Yes	In addition to manufacturing and selling our own EV charging equipment ChargePoint has over 8 years of experience integrating EVSEs from other manufactures onto our network. The ChargePoint Network supports the OCPP v1.6J and 2.0.1 protocol making it possible to integrate any charging station that communicates via the protocol onto our network. ChargePoint has developed a robust integration program with a dedicated team to facilitate this process to adequately conduct integration and ensure stations works as expected. Currently our portfolio of charge management software supports charging hardware from: ABB Alfen Alpitronics IES Eaton Ebusco Heliox Proterra Tritium and more.
2	Must provide a web-based platform that includes exportable data and a dashboard showing information and controls that will be available from the proposed charging station. To include at a minimum: - Station identifier - Physical location - Charging station status - Charging session start/stop times - Active charging time - kWh delivered to the bus - Power consumed by the charger (kw) Please indicate all software reporting capabilities.	Yes	Yes we have an interactive dashboard that provides in-depth and real-time charger and vehicle monitoring and management as well as exportable data capabilities and automated reports. Real-time - charging session: SoC power consumption energy drawn departure time load profile max/min power transfer vehicleID connection start/end expected finish time) Real-time management - boost charge start/stop reset apply setpoint unlock notification and alarms	Yes		Yes	BetterFleet Manage offers an interactive dashboard which is fully capable of meeting the minimum reporting requirements. Beyond this, BetterFleet provides additional functionality such as information on charger alerts - helpful for troubleshooting common issues and completing root cause failure analysis - as well as the ability to restart chargers (both soft and hard restarts) and override charging schedules if needed. It also provides information such as time to charge and other data that is critical for school bus operations.	Yes	Yes	Yes	Flipturn's robust web-based platform allows for data exporting and API interface. Our platform includes all of the minimum requirements in the specification as well as: - Telematics integration for easy identification of vehicle location and state of charge - Depot View to allocate charging stations and vehicles to individual depots - Site/Depot wide power limits - Late charging/late vehicle departure predictions - Vehicle charging prioritization - Manual charging overrides - Charging station error reporting with OEM error explanation - Charging session timeline - Utility rate integration - Alerting functionality Standard Reports: - Charger Health Report - Charging Error Report - Charging Summary Report with calculated sustainability metrics - Fleet Efficiency Report - Vehicle Range Report - Power Demand Report with utility rate integration and peak demand capture - Energy Usage Report with utility rate integration	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) Please refer to Section 2 of the attached ChargePoint Solutions Overview for additional details.	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) Please refer to Section 2 of the attached ChargePoint Solutions Overview for additional details		
3	Software must have the ability to grant 3rd party data collection and administrative access (Purchaser and ASTSBC) to stations via secure web interface or API.	Yes	We can integrate via API with any system relevant to a fleets operation (ERP telematics fleet management solar battery storage depot management SCADA eroaming). Some of these integration be used for optimizing charging -	Yes		Yes	BetterFleet is built on a open and accessible API driven architecture. We believe in open data access and will facilitate this request via API xls downloads.	Yes	Yes	Yes	Yes API for BC LFCS and Canadian Federal Carbon credits is available.	Yes	Yes our web interface allows multiple levels of access within or outside of the ASTSBC. We also have a comprehensive suite of API's for secure data collection.	Yes	ChargePoint cloud software allows API integration and web-based data downloads.	Yes	ChargePoint cloud software allows API integration and web-based data downloads.
5	Supplier is responsible for enabling cellular connectivity to a data network prior to installation. Please describe proposed network.	No	A data network is not typically provided by a charge management software provider. Please confirm if this is a mandatory requirement.	Yes		Yes	4G LTE Cellular Routers will be installed and used on the project. Our architecture includes two separate hardware devices (rather than one dual sim device), each on separate cellular networks. This can be used for both the charger internet connectivity and all BetterFleet hardware.	Yes	Yes	Yes	Our cellular provider gives the option to choose between multiple major cellular networks including Bell Rogers and Telus as applicable to the best signal strength for the charger installation.	Yes	Yes we will activate the charging stations onto our network via pre-commissioning with the selected hardware vendor or utilizing the included SIM card at time of charger activation. For chargers that do not include a native SIM card Flipturn uses a multi network SIM card and connects to all major networks like Telus Bell Rogers Videotron	Yes	All ChargePoint products utilize a private cellular network for security purposes; network activation is completed by ChargePoint during the install process.	Yes	All ChargePoint products utilize a private cellular network for security purposes; network activation is completed by ChargePoint during the install process.
6	Supplier will perform the testing and commissioning of the software with the applicable charging station/s so that it is functional and ready for use.	Yes	As part of our onboarding process we will work with the clients and the hardware providers to ensure the system is configured correctly and fully functional	Yes		Yes	A cornerstone of BetterFleet's approach to deploying its charge management system is ensuring integration of chargers and electric school buses. We attest that we facilitate the process of ensuring systems 'speak' to one another through testing and commissioning.	Yes	Yes	yes	Yes	Yes Flipturn has already performed interoperability testing with the vendors referenced in the above list we will perform additional testing on the required hardware if the chosen hardware vendor is referenced above. At time of charger install we will perform commissioning and final testing as well to ensure all data we are receiving from the charger is valid and the charger is ready for use.	Yes	ChargePoint is a vertically integrated solution provider. This means we design engineer and manufacture all elements of the solution including hardware software and services to best meet customer needs. This approach also avoids the challenges and risks associated with matching different hardware and software vendors and having to determine responsibilities when inevitable issues arise. ChargePoint ultimately provides customers with a “one stop shop” for all your charging needs with the highest degree of confidence in quality reliability and functionality.	Yes	ChargePoint is a vertically integrated solution provider. This means we design engineer and manufacture all elements of the solution including hardware software and services to best meet customer needs. This approach also avoids the challenges and risks associated with matching different hardware and software vendors and having to determine responsibilities when inevitable issues arise. ChargePoint ultimately provides customers with a “one stop shop” for all your charging needs with the highest degree of confidence in quality reliability and functionality.	

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Line Item	Specifications	Hypercharge Networks CORP		InCharge Energy		Nuvve		PD McLaren Ltd.		Polara Energy		Siemens Canada		Synop Inc.		Wesco Distribution Canada		
		Yes/No	Additional Information	Yes/No	Additional Information	Yes/No	Additional Information	Yes/No	Additional Information	Yes/No	Additional Information	Yes/No	Additional Information	Yes/No	Additional Information	Yes/No	Additional Information	
1	Capable of integration with other manufacturers' charging equipment. Please indicate the manufacturers and models of charging equipment to which the software is compatible with.	Yes	a.AC Destination 3-22 kW b.DC Destination 11-24 kW c.DC Fast 50-180 kW d.DC High Power 175-350+ kW AddEnergie (via OCPi) a.SmartTWO b.CoRe+ c.SmartDC 50-100+ kW Delta a.AC Max b.AC Mini Plus c.AC Mini d.DC SLIM 100 kW e.UFC 150 kW f.UFC 200 kW Efacec a.QC 60/90/120 kW b.HV 350 kW c.HV 160 kW EVduty	IES Synergy (to be certified in Q3-2023) a.Keywatt 24 kW b.Keywatt 50 kW c.Keywatt 100 kW JointTech a.EVC10 4-20 kW b.EVC11 7-22 kW c.EVC12 7-22 kW JuiceBar a.JuiceBar GEN 3 (32-80A) 7-20 kW Kempower (to be certified in Q1-2023) Lite-On a.IC-3 AC Charger Siemens a.VersiCharge 9-115 kW b.VersiCharge Ultra 50 kW c.VersiCharge Ultra 175 kW Teltonika (to be certified in Q2-2023) a.Teltocharge	Yes	Our software has been tested with the following EVSE manufacturers: ICE ABB LiteOn JuiceBar Siemens Delta Tellus Power SemaConnect Freewire and Power Electronics. We have an active program to add further EVSE as we see customer demand. All industry standard OCPP 1.6-J chargers can communicate with our software for session reporting. 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.	No	Only if Nuvve does the Integration	Yes	We are capable of integrating with all other OCPP-enabled networks and charging stations.	Yes	Polara's CMS is fully interoperable with all Level 2 and Level 3 chargers listed in this response ensuring seamless communication control and performance across a wide range of hardware.	Yes	Software compliant with other OCPP compliant hardware.	Yes	As detailed within 'Minimum Qualification' and 'Scope of Services' response	Yes	Any OCPP capable hardware
2	Must provide a web-based platform that includes exportable data and a dashboard showing information and controls that will be available from the proposed charging station. To include at a minimum: - Station identifier - physical location - Charging station status - Charging session start/stop times - Active charging time - kWh delivered to the bus - Power consumed by the charger (kw) Please indicate all software reporting capabilities.	Yes	Yes and described in supplemental document.	Yes	InControl is a web-based application no additional hardware or software needed. InControl provides a comprehensive view of EV charging station information which can be accessed by drivers fleet managers and customers in real time and static basis. This information can be used to improve the efficiency of EV charging operations optimize fleet management and make better decisions about EV charging infrastructure investments. Customers manage access control user invitations and permissions configure reports edit chargers vehicles and sites manage notifications set load and energy management policies and file and monitor support tickets. The location of each station including its address city state geocoordinates and zip code. kWh costs/consumption: We enable users to enter tariff information for cost tracking. This enables us to track the cost of charging an EV at each station on a session basis as well as the amount of energy consumed by each charging session. Power levels: The maximum power output of each station. Online status: The current status of each station whether it is online and available for use offline for maintenance or out of order. Occupancy: The number of vehicles currently charging at each station and overall utilization of an account site or group of chargers.	Yes		Yes	Our Charger Mangement Software Camber Core collects and logs data about every EV charging session. This data is available to software users to manage and analyze through a web-based platform. Please consider the charging session data points logged below: Transaction ID Start time End time Duration Charger name Charger serial number Connector ID Total energy import Total energy export (to support V2G) EV MAC ID/idTag Vehicle name/VIN Peak and average power during session Number of faults occurring in the session Reason for session ending Start SOC End SOC Min max average current and voltage All OCPP messages exchanged during session including meter values	Yes	Cleo dashboards provide exportable reports real-time control and historical analytics. Please refer to our supporting documentation regarding all Cleo additional functionalities.	Yes		Yes	As detailed within 'Minimum Qualification' and 'Scope of Services' response	Yes	Please refer to charging management documentation for detailed information	
3	Software must have the ability to grant 3rd party data collection and administrative access (Purchaser and ASTSBC) to stations via secure web interface or API.	Yes	If successful Hypercharge will make API available in order to integrate with 3rd party apps.	Yes	Customers manage access control user invitations and permissions configure reports edit chargers vehicles and sites manage notifications set load and energy management policies and file and monitor support tickets. InControl offers several user roles based on customer configuration as well as licenses purchased. The base license includes a Member provided read-only access to views and reports and Admin where the user can manage users access control alerts naming customize reports view error/issue reports set load and energy management policies and file and track support cases. Premium features enable roles that can access the API and API key management telematics integrations credit card integrations and PowerBI dashboards. We can also create custom roles to suit customers with specialized needs - we have over 80 different role touchpoints	Yes		Yes	We offer this via OCPP pulling a report from our web based portal and API.	Yes	REST API and web-based portals are available to authorized stakeholders.	Yes		Yes	As detailed within 'Minimum Qualification' and 'Scope of Services' response	Yes		
5	Supplier is responsible for enabling cellular connectivity to a data network prior to installation. Please describe proposed network.	Yes	Hypercharge pre-configure the charging station prior to shipping the unit and currently SIMs are with TELUS. Can offer customer's preferred carrier if adverse to TELUS.	Yes	InControl is a web-based application no additional hardware or software needed. Our modems and SIM use 4G.	Yes	Additional equipment will be required for cellular connectivity. We can use any cellular provider used by the customer.	Yes	We utilizing an eSim capable of roaming between multiple networks for optimal coverage.	Yes	Polara configures SIM cards with Bell Telus or Rogers depending on location.	Yes		Yes	Certain EVSE OEMs will provision SIM cards as well as connect their hardware to the Synop cloud prior to shipment as with our 'Works with Synop' partners (https://www.synop.ai/works-with-synop). Where ASTSBC does not select a Works with Synop partner we would ask for the selected partner to build a new process of provisioning our SIMs prior to shipment. This can either be at the manufacturing facility or with a Distribution partner as two examples.	Yes	Eaton	
6	Supplier will perform the testing and commissioning of the software with the applicable charging station/s so that it is functional and ready for use.	Yes	Yes	Yes	We work with roaming SIM Cards which choose the strongest network.	Yes		Yes	Yes we have included charger testing and commissioning in our previous pricing.	Yes	CMS testing is conducted in tandem with charger commissioning to validate sync telemetry and control.	Yes		Yes		Yes		