

Supply and Installation of Four Level 2 ChargePoint EV Chargers at Four Locations

Scope

Supply, Installation, connection and activation of four (4) Dual Level 2 CT4023 EV Chargers to be installed at four locations :

- Municipal office
- Harriston Arena
- Palmerston Arena
- Palmerston water tower

Supplier will coordinate delivery, civil work and installation with the township and Vance Electric. (Electrical Contractor)

This agreement is between ChargerCrew (the Contractor, a division of Arntjen Solar) and the Town of Minto. Location of the EV chargers are as discussed in this document.

1. Site Location and Electrical Service

1.1 Site visit

Jurgen van Dijken and Vance met with All Carr on site to discuss location and available electrical service for the installation of a Dual L2 EV Charger at each location. This quote is based on the requested locations.

1.2 Civil and Electrical Service

Contractor will look after the civil work for all locations and Vance Electric will look after the electrical work. Installtions are turnkey projects and we will look after all aspects of the project.

1.3 Concrete Base and Bollards

A concrete base will be installed for each EV Charger in all four locations in order to mount the charger and the protective bollards, see sample picture. The base will be installed on pact gravel and electrical conduit can be easily fed through the centre hole. Bollards and pad are similar as shown in picture.



1.4 Pavement Painting and Signage

Parking lots will be painted with the required “EV CHARGING ONLY” logo in addition signs will be installed for each parking spot.



Municipal office

Location of Dual L2 EV Charger
2 parking spots



Two EV Parking spots located beside the existing handicap parking spot.



Harriston Arena



Two EV Parking spots located in front of the arena. Parking spots will be painted and have signs with "EV Charging Only"



Palmerston Arena



Two EV Parking spots located over at the barn by the arena. Parking spots will be highly visible from Yonge street. They will have signs with “EV Charging Only”



Palmerston Water Tower



Two EV Parking spots located in front of the Water Tower. Parking spots will have signs with “EV Charging Only”

2. Product Specifications

2.1 Level 2, CT4021

The Level 2 EV charger is a 14.2 kW output and can charge up to 40km/hr. It offers two standard SAE J1772 level 2 charging port with locking holster. The charger is a bollard mount configuration and is a robust unit. The unit is network based and is software upgradeable.

Charging fees can be set by the host site and fees are collected by ChargePoint. The collected fees are transferred to your account. Cost of collecting and transferring funds is 10%.

ChargePoint provides 24/7 support to assist drivers with any questions or concerns. Numerous reports are available to indicate time of use, energy used, peak demand etc.

This unit provides:

Driver Friendly User Interface

- Instructional video shows how to use the station
- Touch button interface; works in rain, ice and with gloves
- Backed by ChargePoint's world class 24/7 driver phone support

Easily Communicate with Your Drivers

- Daylight readable, with auto brightness control
- 640 X 480 resolution active matrix
- Full motion 30fps video support
- Upload up to 60 seconds of high quality video on a color LCD screen to individual stations as often as desired
- Brand your charging stations to communicate with drivers
- Instructional video

Service Products and Support

- Customized setup and activation of your stations
- ChargePoint Assure: extended parts and labor warranty coverage for up to five additional years
- 24/7 driver phone support
- Dedicated station owner support
- Parts and on-site labor maintenance

Panel Sharing and Power Select

- Allows you to charge more EVs without costly electrical upgrades
- Allows for a lower capacity (less than 40A) circuit to power each port

See Appendix A for technical specifications



CT4021

3. Installation

3.1 Installation by Contractor

All Installations are in accordance with manufacturer's instructions and ESA code. Contractor provides project management and Contractor's electrical contractor will perform all AC Electrical connection.

3.2 Testing and Commissioning

Contractor conducts appropriate tests to confirm system is operating as designed, activate and commission the EV chargers. Contractor/Customer makes adjustments as needed to obtain proper performance and desired charging fees.

4. Time frame

Supplier will coordinate the delivery and installation with the customer and electrical contractor for timely an efficient installation. Standard lead-time of product is 2-4 weeks.

5. Contract Price

The price for equipment, delivery and activation plus applicable taxes, conditions of payment are as follows:

Level 2 Charger – CT4023-GW2	Unit Price	Qty	Amount Due
Dual Output Gateway, Bollard mount unit 208/240V @ 30A with Cord Management	\$9,806.06	4	\$39,224.23
Total of 5 years of ChargePoint Assure with successful validation	N/A	5 years	\$7,718.54
System Design and Project Management		1	\$1,020.03
Mechanical Installation, including Concrete base, Bollards and Freight		1	\$7,388.41
Electrical Installation		1	\$12,899.61
Station Activation and Configuration		4	\$1,272.68
Pavement painting, Signage, Customer Training, Project Binder and Annual reporting		4	\$3,053.30
Service and Maintenance - 5 years		5 years	\$6,000.00

Total Project cost:		\$78,576.79
	HST	\$10,214.98
	Total cost	\$88,791.77

6. Payment terms & Conditions

All Equipment costs are payable in Canadian Funds as outlined plus HST. A 10% deposit is required at time of signing of this contract. Balance of payment is required NET 30 days after commissioning and acceptance of the system.

All prices provided are including applicable taxes and valid for a period of 30 days. All other terms are outlined in our **“Terms and Conditions of Sales for Goods and Services”**

Payment Structure	%		Amount Due
First Payment – 10% Deposit	10%		\$8,879.18
Balance of Payment	90%		\$79,912.60
Total Payment	100%		\$88,791.77

7. Workplace Electric Vehicle Incentive Program

This project has been awarded 80% of the project cost, up to \$60,000 incentive upon successful completion of the project by the required deadline of August 14th, 2018. Including in this proposal is the final submission of the required paperwork to the Government.

Acknowledgement

I hereby accept the above quotation and authorize Arntjen Solar NA Inc. to order the Goods and Services as outlined.

Name:

Date:

Authorized Signature:

Notes:

Please return signed agreement to:

Jurgen van Dijken
Business Unit Manager – Electromobility

Tel: 647.722.9500
Cell: 226.228.4008
info@chargercrew.ca

Appendix A – CT4021 Specifications

CT4000 Level 2 Commercial Charging Stations

Specifications and Ordering Information

Ordering Information

Specify model number followed by the applicable code(s).
The order code sequence is: **Model-Options. Software, Services and Misc** are ordered as separate line items.

Hardware

Description	Order Code
Model	
1830 mm (6') Single Port Bollard Mount	CT4011
1830 mm (6') Dual Port Bollard Mount	CT4021
1830 mm (6') Single Port Wall Mount	CT4013
1830 mm (6') Dual Port Wall Mount	CT4023
2440 mm (8') Dual Port Bollard Mount	CT4025
2440 mm (8') Dual Port Wall Mount	CT4027
Options	
Integral Gateway Modem - USA	-GW1
Integral Gateway Modem - Canada	-GW2
Misc	
Power Management Kit	CT4000-PMGMT
Bollard Concrete Mounting Kit	CT4001-CCM

Software & Services

Description	Order Code
ChargePoint Commercial Service Plan	CTSW-SAS-COMM- ⁿ
ChargePoint Service Provider Plan	CTSW-SAS-SP- ⁿ
ChargePoint Assure	CT4000-ASSURE ⁿ
Station Activation and Configuration	CPSUPPORT-ACTIVE
ChargePoint Station Installation and Validation	CT4000-INSTALLVALID

Note: All CT4000 stations come with 1 year of ChargePoint Assure coverage at no charge for qualified installations. Other conditions apply. All CT4000 stations require a network service plan.

¹ Substitute *n* for desired years of service (1, 2, 3, 4, or 5 years).

² Substitute *n* for the duration of the additional coverage (1, 2, 3, or 4 years).

Order Code Examples

If ordering this	the order code is
1830 mm (6') Dual Port Bollard USA Gateway Station with Concrete Mounting Kit	CT4021-GW1 CT4001-CCM
ChargePoint Commercial Service Plan, 3 Year Subscription	CTSW-SAS-COMM-3
ChargePoint Station Installation and Validation	CT4000-INSTALLVALID
2 Additional Years of Assure Coverage	CT4000-ASSURE2
1830 mm (6') Single Port Wall Mount Station	CT4013
ChargePoint Commercial Service Plan, 5 Year Subscription	CTSW-SAS-COMM-5
4 Additional Years of Assure Coverage	CT4000-ASSURE4
Station Activation and Configuration	CPSUPPORT-ACTIVE



CT4021

Electrical Input	Single Port (AC Voltage 208/240V AC)			Dual Port (AC Voltage 208/240V AC)		
	Input Current	Input Power Connection	Required Service Panel Breaker	input Current	Input Power Connection	Required Service Panel Breaker
Standard	30A	One 40A branch circuit	40A dual pole (non-GFCI type)	30A x 2	Two independent 40A branch circuits	40A dual pole (non-GFCI type) x 2
Standard Power Share	n/a	n/a	n/a	32A	One 40A branch circuit	40A dual pole (non-GFCI type)
Power Select 24A	24A	One 30A branch circuit	30A dual pole (non-GFCI type)	24A x 2	Two independent 30A branch circuits	30A dual pole (non-GFCI type) x 2
Power Select 24A Power Share	n/a	n/a	n/a	24A	One 30A branch circuit	30A dual pole (non-GFCI type)
Power Select 16A	16A	One 20A branch circuit	20A dual pole (non-GFCI type)	16A x 2	Two independent 20A branch circuits	20A dual pole (non-GFCI type) x 2
Power Select 16A Power Share	n/a	n/a	n/a	16A	One 20A branch circuit	20A dual pole (non-GFCI type)
Service Panel GFCI	Do not provide external GFCI as it may conflict with internal GFCI (CCID)					
Wiring - Standard	3-wire (L1, L2, Earth)			5-wire (L1, L1, L2, L2, Earth)		
Wiring - Power Share	n/a			3-wire (L1, L2, Earth)		
Station Power	8W typical (standby), 15W maximum (operation)					

Electrical Output

Standard	7.2kW (240V AC @ 30A)	7.2kW (240V AC@30A) x 2
Standard Power Share	n/a	7.2kW (240V AC@30A) x 1 or 3.8kW (240V AC@16A) x 2
Power Select 24A	5.8kW (240V AC@24A)	5.8kW (240V AC@24A) x 2
Power Select 24A Power Share	n/a	5.8kW (240V AC@24A) x 1 or 2.9kW (240V AC@12A) x 2
Power Select 16A	3.8kW (240V AC@16A)	3.8kW (240V AC@16A) x 2
Power Select 24A Power Share	n/a	3.8kW (240V AC@16A) x 1 or 1.9kW (240V AC@8A) x 2

Functional Interfaces

Connector(s) Type	SAE J1772™	SAE J1772™ x 2
Cable Length - 1830 mm (6') Cable Management	5.5 m (18')	5.5 m (18') x 2
Cable Length - 2440 mm (8') Cable Management	n/a	7 m (23')
Overhead Cable Management System	Yes	
LCD Display	145 mm (5.7") full color, 640x480, 30fps full motion video, active matrix, UV protected	
Card Reader	ISO 15693, ISO 14443, NFC	
Locking Holster	Yes	Yes x 2

Safety and Connectivity Features

Ground Fault Detection	20mA CCID with auto retry
Open Safety Ground Detection	Continuously monitors presence of safety (green wire) ground connection
Plug-Out Detection	Power terminated per SAE J1772™ specifications
Power Measurement Accuracy	+/- 2% from 2% to full scale (30A)
Power Report/Store Interval	15 minute, aligned to hour
Local Area Network	2.4 GHz Wi-Fi (802.11 b/g/n)
Wide Area Network	3G GSM, 3G CDMA

Safety and Operational Ratings

Enclosure Rating	Type 3R per UL 50E
Safety Compliance	UL listed for USA and cUL certified for Canada; complies with UL 2594, UL 2231-1, UL 2231-2, and NEC Article 625
Surge Protection	6kV @ 3000A. In geographic areas subject to frequent thunder storms, supplemental surge protection at the service panel is recommended.
EMC Compliance	FCC Part 15 Class A
Operating Temperature	-30°C to +50°C (-22°F to 122°F)
Storage Temperature	-30°C to +60°C (-22°F to 140°F)
Non-Operating Temperature	-40°C to +60°C (-40°F to 140°F)
Operating Humidity	Up to 85% @ +50°C (122°F) non-condensing
Non-Operating Humidity	Up to 95% @ +50°C (122°F) non-condensing
Terminal Block Temperature Rating	105°C (221°F)
Charging Stations per 802.11 Radio Group	Maximum of 10. Each station must be located within 45m (150') "line of sight" of a gateway station.