PLUG-IN
VEHICLE SOLUTIONS

ELECTRIC CAR CHARGING STATIONS

PLUG-IN
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About Plug-In Vehicle Solutions

Plug-in Vehicle Solutions is a manufactures representative for various electrical recharging systems for all electric vehicles. We also offer various training and educational offerings that can assist our clients with the transition to Electric Vehicles (EV), Neighborhood Electric Vehicles (NEV) & Plug-In Hybrid Electric Vehicle (PHEV) programs.

Plug-in Vehicle Solutions is dedicated to positively impacting the alternative transportation industry by assisting in creating a sustainable smart-grid recharging network for all electric and plug-in hybrid vehicles within the U.S.A. Every dollar sent overseas on foreign energy hurts our economy and impacts our sovereignty. We feel it is our patriotic duty to foster the growth of electric and plug-in hybrid vehicles and promote the use of US-made energy.

PLUG-IN
VEHICLE SOLUTIONS

Why are we different?

- Offer multiple EV Charging Station solutions to fit your needs.
- Units can charge up to 4 vehicles at once, saving thousands of dollars in installation costs.
- Offer custom labeling/graphics on charging stations.
- Select units can accept credit cards/debit cards to create revenue.
- Offer complete installation and maintenance packages.
- Offer Truck Electrification Products to promote idle reduction for freight trucks.Offer location surveying for best placement of EV Charging Stations.

Commercial and Institutional Customers

Plug-In Vehicle Solutions is the the leading manufacturer representative of safe and reliable electric vehicle recharging products. EV charging stations are the perfect way for businesses and commercial buildings to show that they welcome a clean transportation future while maintaining an uncluttered and safe parking facility. Our portfolio of solutions can be a highly visible and cost-effective.

Where People Live – Homes, Condos, Apartment Buildings

Our customers want the operation of their electric cars to be simpler, safer, and more convenient than their conventional gas automobiles. They don't want a tangle of power cords cluttering their garage or condominium parking area. They will want a home charging station that is easy to install and use.

Clipper Creek

ShorePower

Plugless Power

GoSmart

Coulomb

EV & PHEV Charging Stations

CS Series EVSE

OUR FLAGSHIP PRODUCT

- UL listed. Outdoor Rated (NEMA 4) enclosure.
- Reclosure: Smart software that automatically self-checks unit and resumes charging after minor fault.
- Charge Circuit Interruption Device: Ground Fault protection with fully automatic self-check feature that eliminates the need for monthly testing by user.
- Service Ground Monitor: Constantly checking for presence of proper safety ground.
- External Control Input: Allows external control from smart meter (AMI), billing or load management device.
- Cold Load Pickup: Time-delayed and randomized to allow re-energizing of unit following power outages.

PRODUCT SPECS

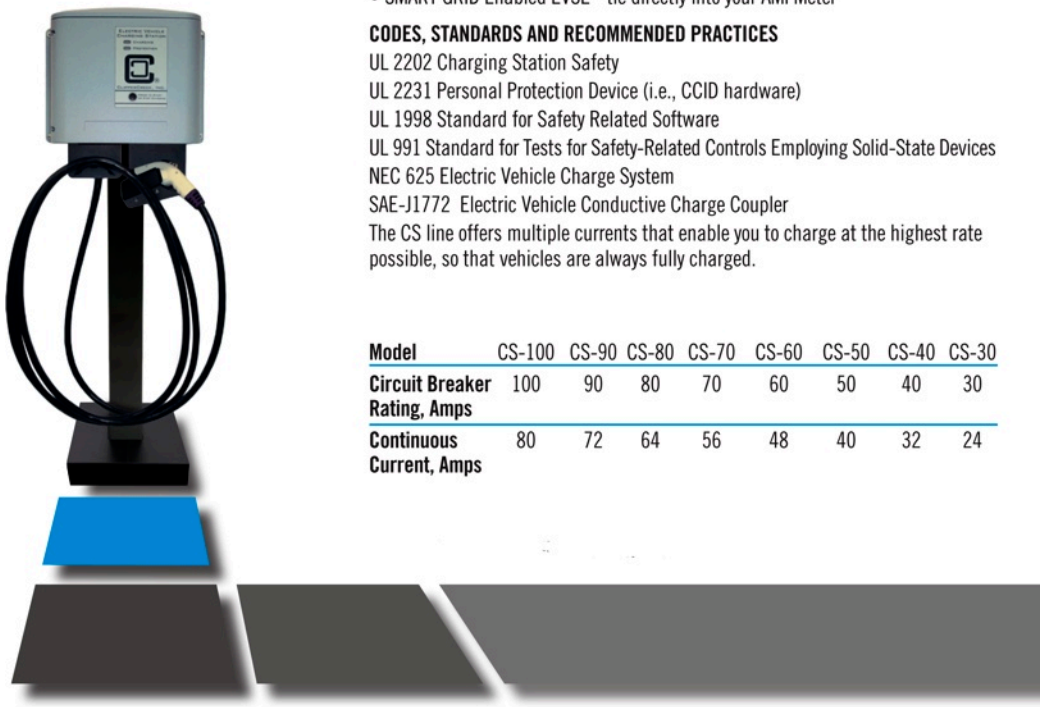
- Service Entrance: 208V to 240V - 30 to 100 Amps, single phase, 2 wire w/ground
- 17" W x 14" H x 6" D (430mm W x 360mm H x 150mm D) NEMA 4 Construction
- Operating Temperatures: -22 F to 122 F (-30 C to 50 C)

AVAILABLE THIS FALL

- Innovative low cost BILLING SYSTEM
- SMART GRID Enabled EVSE - tie directly into your AMI Meter

CODES, STANDARDS AND RECOMMENDED PRACTICES

UL 2202 Charging Station Safety
UL 2231 Personal Protection Device (i.e., CCID hardware)
UL 1998 Standard for Safety Related Software
UL 991 Standard for Tests for Safety-Related Controls Employing Solid-State Devices
NEC 625 Electric Vehicle Charge System
SAE-J1772 Electric Vehicle Conductive Charge Coupler
The CS line offers multiple currents that enable you to charge at the highest rate possible, so that vehicles are always fully charged.



Model	CS-100	CS-90	CS-80	CS-70	CS-60	CS-50	CS-40	CS-30
Circuit Breaker Rating, Amps	100	90	80	70	60	50	40	30
Continuous Current, Amps	80	72	64	56	48	40	32	24

ClipperCreek®
THE Electric Vehicle Charging Station

SHOREPOWER TECHNOLOGIES

Electric Vehicle Charging Station Specifications*

	Level 1 Station	Level 2 Station
		
Certifications/Compliance	Pending NRTL (UL standard) / NEC	Pending NRTL (UL standard) / NEC / SAE J1772
Number of users	Up to four	Up to three (L1/L2 combination or two L2); customizable multi-user
Input power	208-240v 2-pole 40 Amp	208-240v 2-pole, up to 100 Amp
Output power	120v 20 Amp per receptacle	240v 30 Amp per receptacle
Communications	Ethernet (optional)	4G WiMax™, 3G CDMA Cellular, 802.11 WiFi, 802.15.4 (e.g. ZigBee™/X-bee)
Outlets/Connector	NEMA 5-20R GFCI receptacles	SAE J1772
Touch screen	No	Yes, 8" color, interactive
Alerts	N/A	Charge complete status, station status and unauthorized disconnect alerts via SMS text or email
Monitoring and reporting	Web-based portal; users with an account can access detailed online information about usage, access times, energy consumed and billing (optional)	Web-based portal; users with an account can access detailed online information about usage, access times, energy consumed and billing (optional)
Charge level upgradeability	Yes, to Level 2	N/A
Safety/security	Overcurrent & GFCI protection	Overcurrent & GFCI protection; car-to-cord safety detection; locking cord and access doors (optional); video surveillance (optional)
Availability	Shipping now	Approx. Q3'2010
Payment system	Toll-free phone number and Internet activation	Industrial outdoor card reader accepting all major credit/debit cards and/or proprietary cards (e.g. fleet, student or employee card)
System error reporting	N/A	"Phone home" with critical maintenance and error information to station owner
Weight	Pedestal: 100 lbs. Wall: 40 lbs.	Pedestal: 130 lbs. Wall: 70 lbs.
Visibility	Backlit outlets and globe with automatic photocell illumination	
Operating range	-40˚C to 85˚C (-40˚F to 185˚F)	
Design options	Pedestal or Wall Mount	
Dimensions	Freestanding pedestal: 87" tall x 18" wide x 10.5" deep Wall mount: 20" tall x 16" wide x 9" deep	
Materials and construction	High-quality, durable brushed stainless steel; weather and tamper resistant	
Lead time	3-6 weeks from PO for items not in inventory	

* Subject to change

PLUG-IN VEHICLE SOLUTIONS

Level 1 Charging

SHIPPING NOW

Standard Features

- Input: 208-240v 2-pole 40 Amp
- Output: Up to four (4) Level 1 outlets – standard 120 volt, 20 amp outlets (NEMA 5-20R)
- Fully upgradeable to Level 2, SAE J1772 standards with corded connector
- Backlit outlets for nighttime visibility
- High-quality, durable brushed stainless steel; weather and tamper resistant
- Pending NRTL (UL standard) / NEC
- Overcurrent & GFCI protection
- Lead time: 3-6 weeks from PO for items not in inventory

Optional Features

- Web-based monitoring/reporting system - detailed information about usage, access times, energy consumed and billing
- Payment system
- Automatic evening globe illumination

Customized Options

Shorepower's "open source" charging stations can be customized to meet any design or technology requirements including:

- Logos, decals and information panels
- Custom payment systems
- Multiple charging levels
- Monitoring and reporting
- Alerts
- Security
- Multi-user options
- Advertising and public service announcements
- Metering
- Multi-application options such as parking meter/ charging combination

Level 2 Charging

SHIPPING Q3'10

Standard Features

- Input: 208-240v 2-pole, up to 100 Amp
- Output: Up to three (L1/L2 combination or two L2); 240v 30 Amp per receptacle
- Backlit outlets for nighttime visibility
- High-quality, durable brushed stainless steel; weather and tamper resistant
- "Phone home" with critical maintenance and error information to station owner
- Pending NRTL (UL standard) / NEC
- Lead time: 3-6 weeks from PO for items not in inventory, starting Q3, 2010

Optional Features

- Web-based monitoring/reporting system - detailed information about usage, access times, energy consumed and billing
- SMS Text or email alerts: Charge complete status, station status and unauthorized disconnect

- 8" color, interactive touch screen
- Wireless, cellular and Ethernet communication
- Payment system— Industrial outdoor card reader accepting all major credit/debit cards and/or proprietary cards (e.g. fleet, student or employee card)
- Automatic evening globe illumination

Plugless Power™

park and go

Now accepting orders for cord units available for shipment 4th quarter 2010

Evatran™, manufacturer of Plugless Power™, the hands-free, proximity charging system for electric vehicles, will begin accepting orders for upgradable cord units available for delivery in the fourth quarter of 2010. These Level II (240 volt) units, shown in conceptual images here, will include the industry's standardized plug, SAE regulation J1772, which is compatible with both the Nissan Leaf and the Chevrolet Volt. These units will be later upgradable to include proximity charging in the second quarter of 2011.

	Tower Cord Unit	Wall-Mount Cord Unit	Pre-pay for upgrade to proximity charging*
Availability	December 2010	January 2011	2nd Quarter 2011
AC Power Input	Level II: 32A, 208/240 VAC	Level II: 32A, 208/240 VAC	Level II: 32A, 208/240 VAC
Recommended Service Panel Breaker	40A, 2P, on dedicated circuit	40A, 2P, on dedicated circuit	Remains on same circuit
Outdoor Rated	NEMA 3R	NEMA 3R	NEMA 3R
Weight**	85 lbs.	60 lbs.	Additional 50 lbs.
Dimensions**	40 x 139 x 20 cm	40 x 93 x 20 cm	No additional space
Safety Compliance:	UL 2202, 2231, 2251, 1998, 991; NEC 625; SAE J1772, ICNIRP		

All cord units include tamper-proof hardware, commercial grade materials, SAE J1772 standardized plug and cord management holster. Systems require electrical installation *(not included in price)*.

PLUG-IN VEHICLE SOLUTIONS

Plugless Power™

PLUG-IN VEHICLE SOLUTIONS

Electrical Specifications

Charging Power Output	Maximum 7.7kW
Charging Input Voltage	208 / 240 VAC
Charging Input Current	32 A
Input Power Connections	Line 1, Line 2, and Earth connection
Recommended Service Panel Breaker	40A, 2P, breaker on dedicated circuit

Functional Details

Charging Connector	SAE J1772™ EV Connector on a 15' (4.57m) cable
Plug-out Detection	Power terminated in line with SAE J1772™ specification
Integral Hardware GFCI	20mA CCID with auto retry (15 minute delay, 3 tries)
Cold Load Pick-up	Random restart after power loss per SAE J29930-1
Manufacturing	Manufactured in the USA using recycled materials when possible

Safety Ratings

Safety Standards	UL listing with production units; UL 2202, 2231, 1998, 991, 746C; NEC 625; SAE J1772, J2993
Enclosure	NEMA 3R
Operating Temperature	-30° to 50°C (-22° to 122°F)
Operating Humidity	95% condensing
Approximate Weight	70 lbs (31.75kg)

Technical specifications and safety ratings

AC Charging Power Output	Maximum 7.7kW (240V at 32A), SAE Level II EVSE
AC Power Input, Circuit Required	Level II: 16A or 32A; Line 1, Line 2, and Earth connection, 208VAC or 240VAC operation
Recommended Service Panel Breaker	20A or 40A, 2P, breaker on dedicated circuit
Outdoor Rated	NEMA 3R
Safety Compliance	UL 2202, 2231, 2251, 1998, 991, 746C; NEC 625; SAE J1772, J2993; ICNIRP Compliant
Operating Temperature/ Humidity	-30 to 50°C (-22 to 122°F); 95%, condensing
Power Factor	≥0.90
Integral Hardware GFCI	20mA CCID with auto retry (15 min delay, 3 tries)
Approximate Weights*	**Vehicle Adapter and on-board electrical components:** ~15 lbs. **Parking Block:** 70 lbs. **Control Console (Tower):** 50 lbs.
Approximate Dimensions*	**Vehicle Adapter:** round disc with center cut-out; ~16 cm (with ~5cm cut out) x ~5cm **Parking Block:** 183cm x 76cm x 10.8cm; can be optimized for vehicle **Control Console (Tower):** 40cm x 139cm x 20cm
Additional Details	• Cold Load Pick-up: Random restart after power loss per SAE J29930-1 • CCID self test • Commercial grade units include tamper-proof hardware • Plug attachment includes SAE J1772 standardized plug and cord management holster

GoSMART Technologies

ChargeSPOT™ RF-30A

- Level 2 charging of SAE J1722
- Multiple networking options
- Monthly electrical usage statements
- Capable of providing up to **7.2 kw**
- Mobile messaging or email alerts when charging is complete
- Configurable smart charging profiles
- Usage data collection and analytics
- **SmartGrid capable**

The **ChargeSPOT™ RF-30A** is an electric vehicle charging station capable of providing up to **7.2 kw** of power. This is enough power to fully charge most PHEV (Plug-in Hybrid and Electrical Vehicles) in 2-4 hours. The unit is configurable with a number of different networking options to better and more efficiently fit any installed ecosystem. These options include WI-FI, Ethernet, cellular modem, and others. Electrical usage data is securely uploaded to the GoSmart servers and provide energy statistics directly to registered users. The RF-30A also has fully integrated software and user interface.

ChargeSPOT™ RF-30A

	MINIMUM	MAXIMUM	UNITS
VOLTAGE	208	240	VOLTS
AMPERAGE	15	30[1]	AMPS
CONDUCTOR SIZE	10	-	AWG
CONDUIT SIZE	-	3/4	INCHES
POWER[2]	3.12	7.2	KW
AVERAGE CHARGE TIME[3]	-	2.75	HOURS
AVERAGE COST PER CHARGE[4]	-	2.75	DOLLARS
RECOMMENDED SERVICE BREAKER	40 AMP DOUBLE POLE		
RECOMMENDED CIRCUIT WIRING	208-240 4-WIRE (LINE 1, LINE 2, NEUTRAL, GROUND)		
PLUG OUT DETECTION	ACHIEVED THROUGH SAE J1772 PLUG		
POWER MEASUREMENT	REVENUE GRADE METER (+-1%)		
NETWORKING[5]	802.11G (WI-FI) AND WIRED ETHERNET STANDARD		
OUTDOOR RATING[6]	NEMA 3R PER NEMA250-1997		
SAFETY[6]	UL LISTING		
EMI COMPLIANCE[6]	FCC PART 15		
OPERATING TEMPERATURE	-20 TO 50 DEGREES C (AMBIENT)		

PLUG-IN
VEHICLE SOLUTIONS

GoSMART Technologies

ChargeSPOT™ PS-50A

- Level 2 charging of SAE J1722
- Multiple networking options
- Monthly electrical usage statements
- Capable of providing up to **12 kw**
- Mobile messaging or email alerts when charging is complete
- Configurable smart charging profiles
- Usage data collection and analytics
- **SmartGrid capable**

The **ChargeSPOT™ PS-50A** is an electric vehicle charging station capable of providing up to **12 kw** of power. This is enough power to fully charge most PHEV (Plug-in Hybrid and Electrical Vehicles) in 1-2 hours. The unit is configurable with a number of different networking options to better and more efficiently fit any installed ecosystem. These options include WI-FI, Ethernet, cellular modem, and others. Electrical usage data is securely uploaded to the GoSmart servers and provide energy statistics directly to registered users. The PS-50A also has fully integrated software and user interface.

ChargeSPOT™ PS-50A

SUPPLY CIRCUIT	MINIMUM	MAXIMUM	UNITS
VOLTAGE	208	240	VOLTS
AMPERAGE	15	50[1]	AMPS
CONDUCTOR SIZE	10	-	AWG
CONDUIT SIZE	-	3/4	INCHES
CHARGING			
POWER[2]	3.12	7.2	KW
AVERAGE CHARGE TIME[3]	-	2.75	HOURS
AVERAGE COST PER CHARGE[4]	-	2.75	DOLLARS
RECOMMENDED CIRCUIT WIRING	208-240 3-WIRE (LINE 1, LINE 2, GROUND)		
PLUG OUT DETECTION	ACHIEVED THROUGH SAE J1772 PLUG		
POWER MEASUREMENT	REVENUE GRADE METER (+-1%)		
NETWORKING[5]	802.11G (WI-FI) AND WIRED ETHERNET STANDARD		
OUTDOOR RATING[6]	NEMA 3R PER NEMA250-1997		
SAFETY[6]	UL LISTING		
EMI COMPLIANCE[6]	FCC PART 15		
OPERATING TEMPERATURE	-20 TO 50 DEGREES C (AMBIENT)		

PLUG-IN VEHICLE SOLUTIONS

Coulomb Technologies

PLUG-IN VEHICLE SOLUTIONS

Coulomb Technologies is a leader in electric vehicle charging station infrastructure with networked charging stations installed in municipalities and organizations worldwide. Coulomb provides a vehicle-charging infrastructure, with an open system driver network: the ChargePoint Network provides multiple web-based portals for Hosts, Fleet managers, Drivers, and Utilities, and ChargePoint Networked Charging Stations ranging in capability from 120 Volt to 240 Volt AC charging and up to 500 Volt DC charging

Bollard

Pole Mount

Wall Mount

Home/Residential

DC Fast Charging

PLUG-IN
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EV CHARGING UNITS
QUICK REFERENCE GUIDE

CHARGERS	SINGLE	2-3 VEHICLES	4 VEHICLES	INDUCTIVE
LEVEL 1	COULOMB	SHOREPOWER COULOMB	SHOREPOWER	
LEVEL 2	COULOMB GO SMART CLIPPER CREEK EVATRAN	SHOREPOWER COULOMB	SHOREPOWER	EVATRAN
LEVEL 3	COLOUMB	COULOMB		

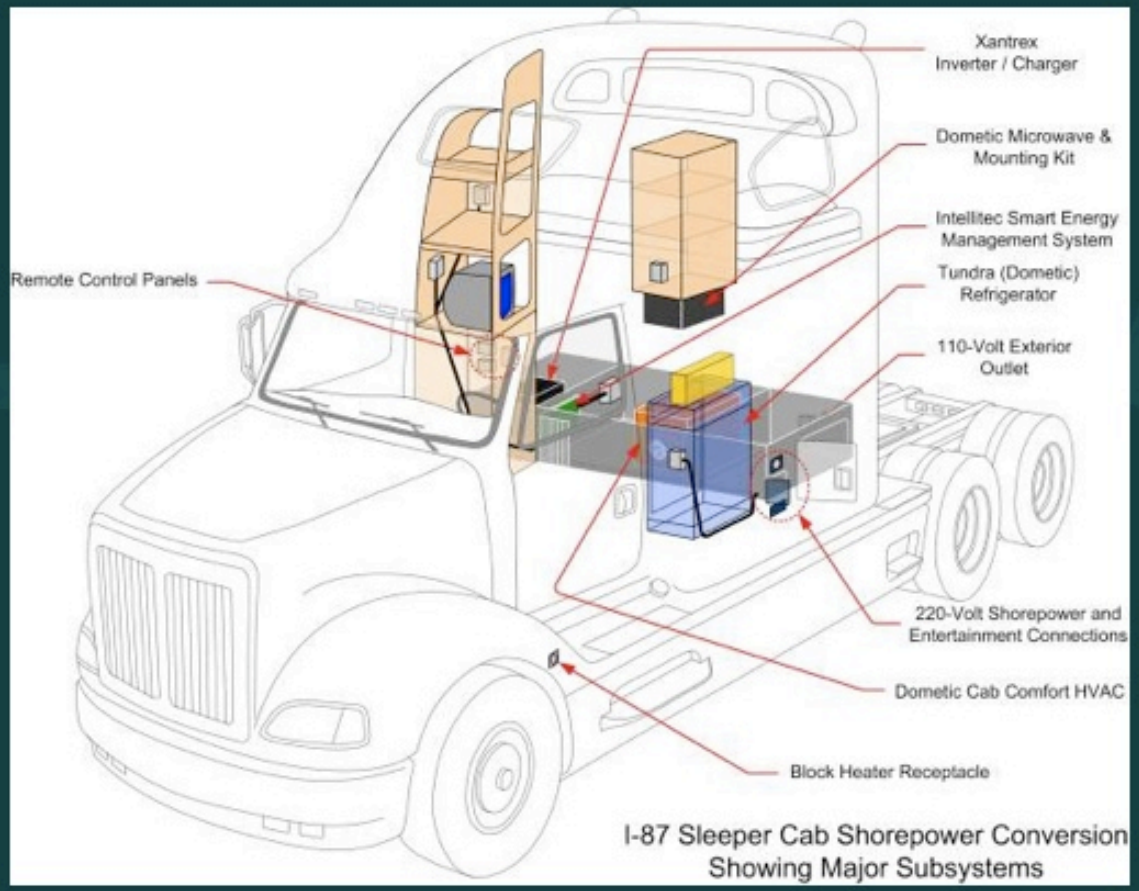
Shorepower Product Overview

Truck Stop Electrification (TSE)

- Payment, control & monitoring system
- Shorepower pedestals
  - 120/208 VAC Power
  - Cable TV
  - Internet – WiFi
  - eTRU connections

PLUG-IN VEHICLE SOLUTIONS

Sleeper Cab System



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Electric Standby Transport Refrigeration Unit
eTRU

Shorepower Trailer Wiring System for eTRUs

– US Patent No. 7,241,146

PLUG-IN
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Noreaster Wind and Lights

You're driving green...
Why not start charging green?

Pairing your
Noreaster Wind and Lights
wind turbine with your Plug-In Vehicle Solution is the greenest way to be mobile since walking.

PLUG-IN VEHICLE SOLUTIONS

Charge up to 4 cars on one station - These charging stations are designed of the highest quality to give your vehicle a full charge every time.

Our line offers multiple currents allowing you to charge your vehicle at the highest possible rate.

Multiple levels of safety for you, your vehicle and the charging equipment.

General Specifications
208 V to 240 V - 30 to 100 Amp
Single phase, 2-wire with ground
Use of additional wire for neutral is unnecessary

Dimensions: 17" x 14" x 6"

Operating Temperatures
-22° F ~ +122° F
-30° C ~ +50° C