The Smarter Way To Charge

Smart Charge Residential, Inc

SMART CHARGE AMERICA

Certified Electric Car Charging Installation Specialists

Owned & Operated by EV Charging Installation Geeks

Ross Griffin - Commercial Sales - Austin/San Antonio

Who are WE?

Smart Charge America

We are a team of EV enthusiast and are passionate about offering the following services exclusively focused inside the electric car charging installation industry:

- DESIGN & CONSULT
- PURCHASE ONLY
- INSTALL ONLY
- FULL TURN-KEY SERVICES

We are:

- Nationwide EVSE DISTRIBUTORS
- Master Certified ELECTRICIANS
- Highly trained industry EXPERTS
- Here to SERVE our CUSTOMERS

In Business Since 2007 - Over 6000 Installs – EV Chargers is All We Do!

Installation & Maintenance Services

Over 6000+ EV charging stations installed across the US.
Since 2007, SCA is the first exclusively focused EV charging station installation company in the US.
Master Certified Electricians using the highest levels of Quality Care and Craftsmanship.
Our Service & Maintenance packages are critical to keeping your assets up and running at all times.

Licensed, Bonded & Insured - 3 Year Installation Warranty!

NATIONAL STRUCTURE

Smart Charge America

AUSTIN	Zach Brahm
DALLAS	Todd Fain
SAN ANTONIO	Zach Brahm
HOUSTON	Abran Vellejo
DENVER	Tim Cutright
PHOENIX	Zach Robertson
SACRAMENTO	Tom Hull
NEW ORLEANS	David Siles
PORTLAND	Jim Ferris
KANSAS CITY	Allen Strausbaugh
BALTIMORE	Brandon Shores
LOS ANGELES	Tim Hagerty
ATLANTA	Neville Reid

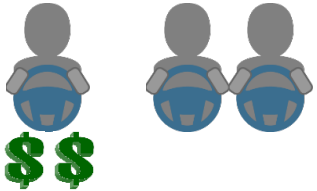
Installations by Smart Charge America

Smart Charge America

©

Considerations For Your Program

How would you like to set up your stations?



- Available to the **public**?
- Do you want to set a **fee**?
- If you set a fee, do you want that fee to **escalate** over time?

- Would you like your stations to be **visible** on **maps**?

- Would you like to allow users to be **notified** when stations become available?

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Top Ten Electric Vehicle (EV) States

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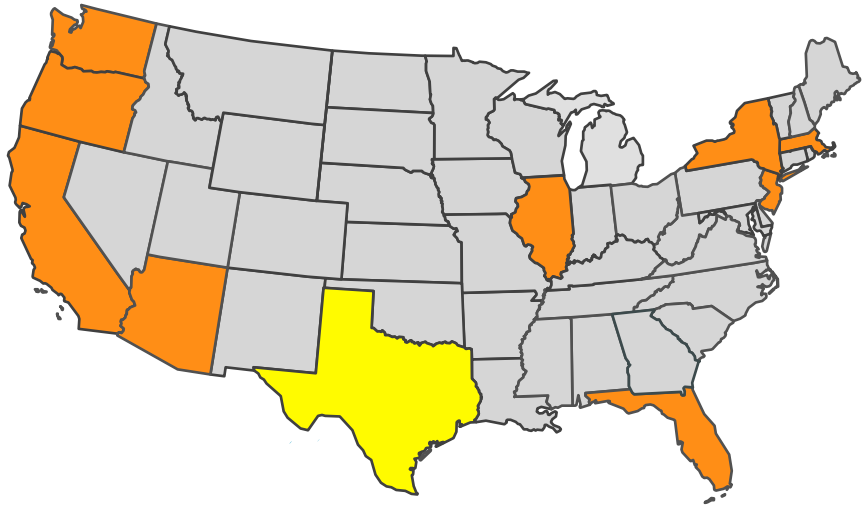
Rank	State	Q3'19
1	California	563,548
2	Florida	52,884
3	Washington	52,382
4	Texas	50,739
5	New York	47,825
6	Arizona	29,448
7	Illinois	28,713
8	New Jersey	28,592
9	Massachusetts	27,085
10	Oregon	27,035



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Source: Polk (no GEM NEVs)

Top Metros for EV Adoption

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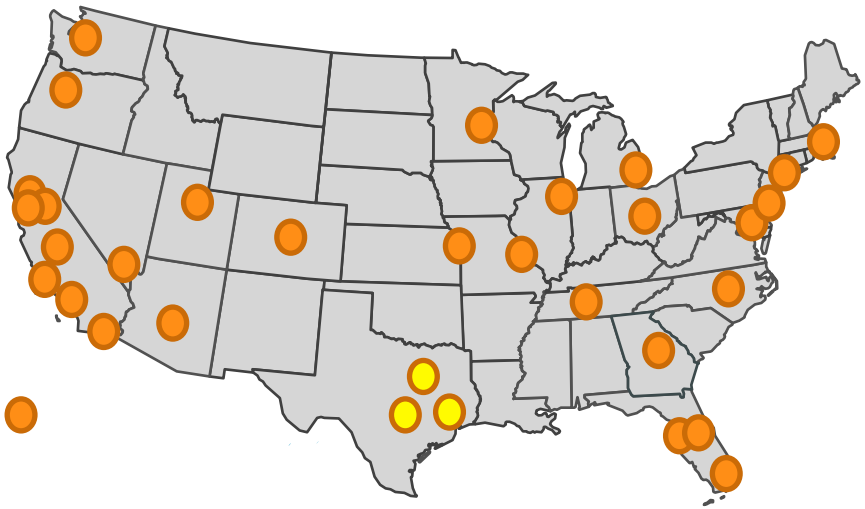
Rank	Metro	Q3'19
1	Los Angeles	208,622
2	San Francisco	111,990
3	San Jose	75,561
4	NY-NJ-PA	54,274
5	San Diego	43,338
6	Seattle-Tacoma	38,582
7	Riverside, CA	33,055
8	Wash DC	28,739
9	Phoenix	25,242
10	Chicago	24,838
11	Sacramento	24,173
12	Atlanta	22,498
13	Boston	21,406
14	Portland	21,299
15	Miami	20,060
16	Dallas-Ft Worth	19,407
17	Philadelphia	16,790
18	Denver	14,198
19	Houston	11,505
20	Oxnard	11,486



Rank	Metro	Q3'19
21	Austin	11,352
22	Detroit	10,208
23	Minneapolis	9,961
24	Baltimore	9,712
25	Santa Rosa	9,304
26	Honolulu	8,513
27	Las Vegas	8,208
28	Tampa Bay	7,927
29	Orlando	7,361
30	St. Louis	5,853
31	Salt Lake City	5,438
32	Raleigh, NC	5,236
33	Fresno	5,184
34	Santa Cruz	5,154
35	Columbus, OH	5,088
36	Charlotte, NC	5,080
37	Kansas City	4,852
38	Norwalk, CT	4,797
39	Stockton, CA	4,781
40	Nashville	4,500

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Source: Polk (no GEM NEVs)

EVs Registered in Texas 50,739

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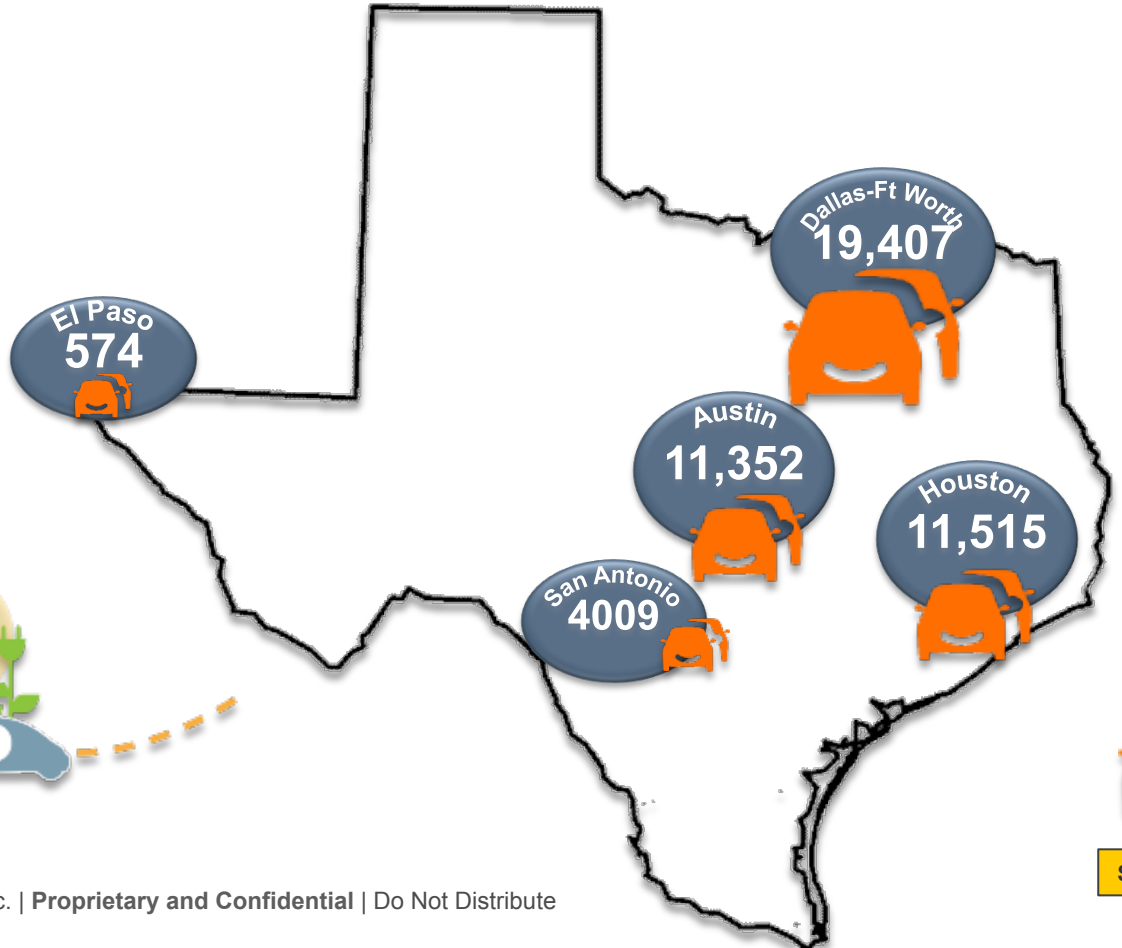

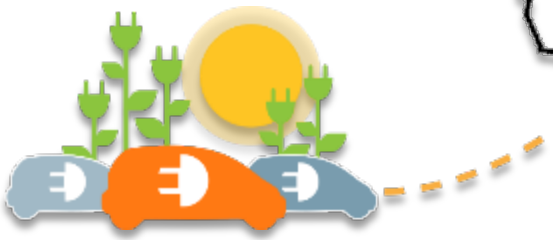

Source: Polk (no GEM NEVs)

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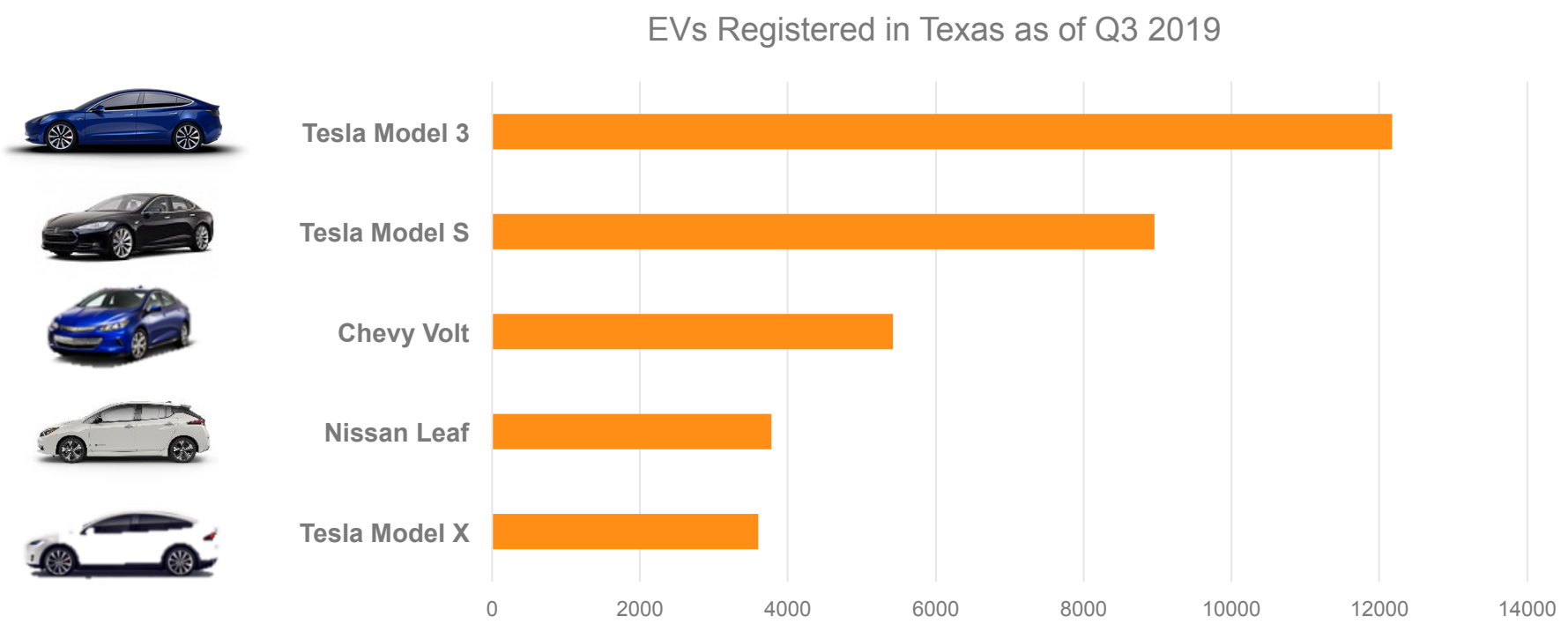
Top EV Models Registered in Texas



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EV Models in USA

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Plug-In Hybrid EV PHEV


Toyota Prius Prime


Chevy Volt


Toyota Prius Plug-in


Cadillac ELR


Mercedez S 550


BMW 740e


Chrysler Pacifica Plug-In


Ford Fusion Energi


BMW X5 xDrive40e


Ford C-Max Energi


Volvo XC90


BMW 330e


Hyundai Sonata Plug-In


BMW i8


Porsche Panamera S E


Porsche Cayenne S E


Audi A3 e-tron

Plug-In Models

44+ currently available
with many more coming in 2020

Battery EV BEV


Toyota Rav 4 EV


Honda Fit


smart EV


Ford Focus Electric


Fiat 500 E

BEV with DC Fast Charge


Chevy Bolt EV


Nissan LEAF


BMW i3


Tesla Model S


Tesla Model X


Mitsubishi i-MiEV


Hyundai Ioniq Electric


VW e-Golf


Chevy Spark


Kia Soul EV


Tesla Model 3


Mercedes B Class

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2020 All Electric (BEV) Landscape

BEV

Tesla Model 3

Nissan Leaf

Smart fortwo

Chevrolet Bolt

Hyundai Kona

Volkswagon eGolf

Tesla Model S

Tesla Model X

Jaguar I Pace

Audi e tron Quattro

Chevrolet Spark

Kia Soul

Fiat 500e

Lucid Air

coming 2022

Porsche Taycan

coming soon

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Upcoming EV/PHEV Models of Interest

2020 Volvo Polestar 2

2020 Audi E-Tron

2020 Mini Electric

2021 BMW i4

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Upcoming EV/PHEV Models of Interest

2020 Mercedes-Benz EQC

2021 Ford Mustang Mach-E

2020 Mercedes-Benz ESprinter

2020 Rivian Amazon Prime Delivery

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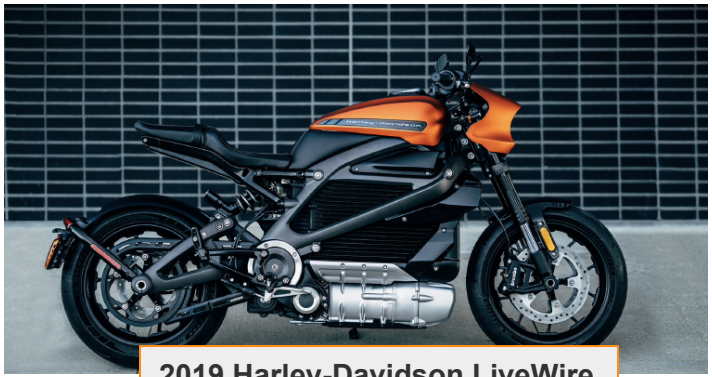
Upcoming EV/PHEV Models of Interest

2021 Tesla Model Y

2022 Fisker Ocean



2019 Harley-Davidson LiveWire

Volkswagen's ID Buzz, ID & ID Crozz

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Upcoming EV/PHEV Models of Interest

2020 Rivian R1S

2021 Ford F-150

2021 Tesla CyberTruck

Lordstown Endurance

2020 Rivian R1T

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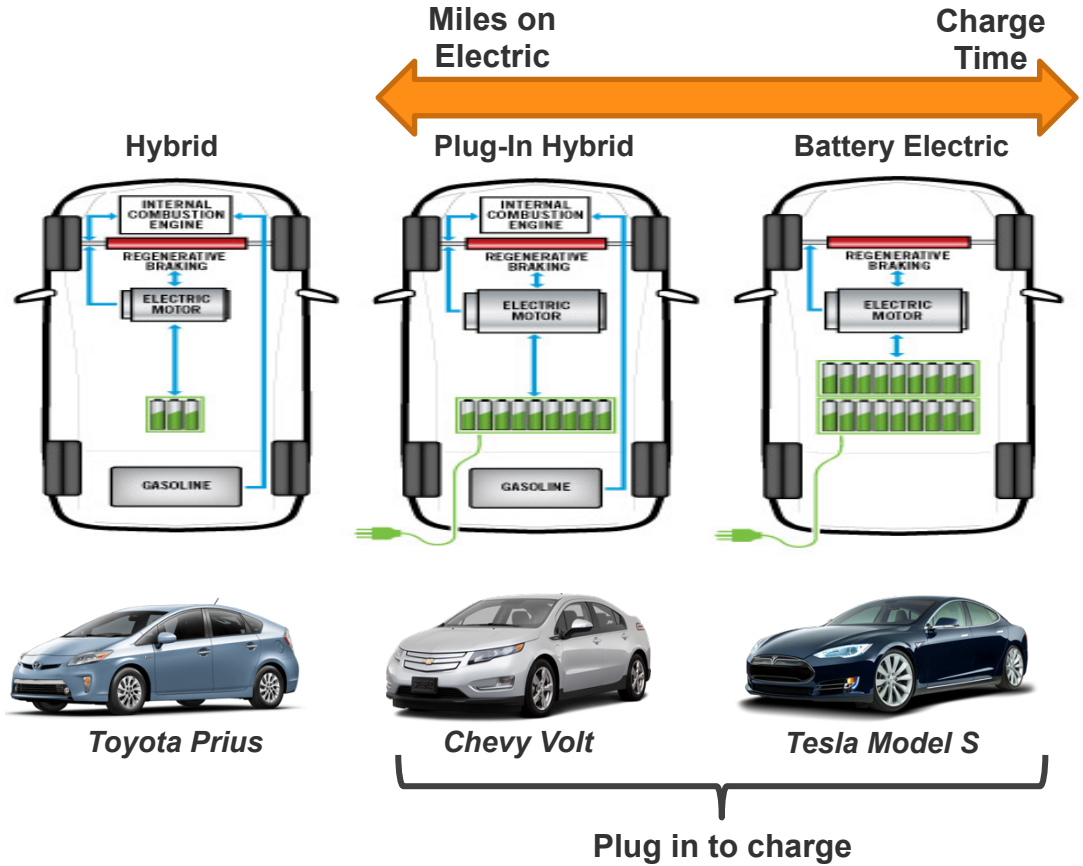
EV 101 - Understanding EV's and EV Drivers

Smart Charge America



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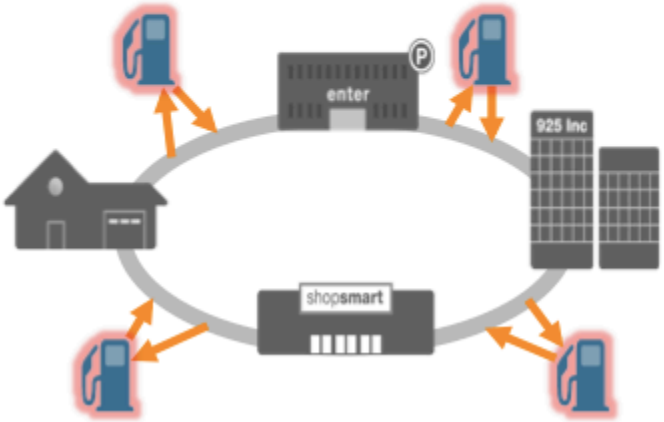
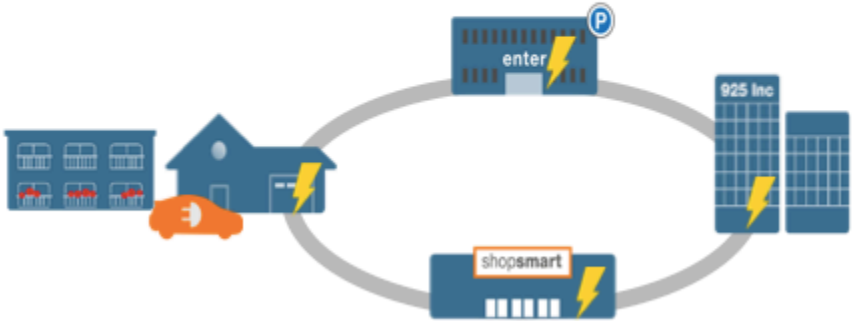
EV Drivers Don't "Fill Up", They "Top Off"

Smart Charge America

*Gas car drivers "**Fill Up**" on the way to where they are going…*



*…electric car drivers "**Top Off**" while they are parked there.*



EV Drivers charge similar to a cellphone … at home over night and top off during the day

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Mobile App: Robust Functionality

Access to Stations

Find Available Stations

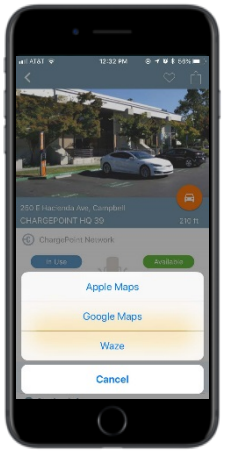
Real-time info and universal map

See Station Pictures

User photos make finding stations easier

Navigation

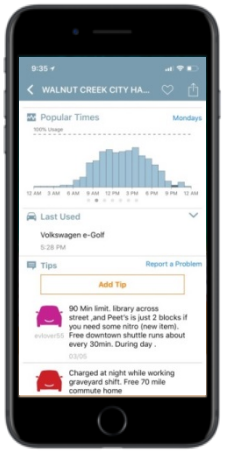
Seamless integration into iOS and Android maps



Tools for Drivers

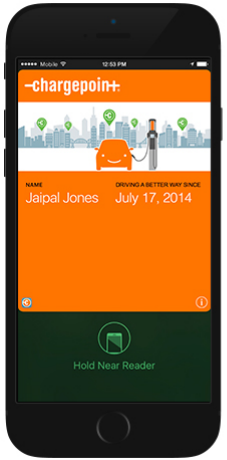
Get Driver Tips

Arrive equipped with best practice advice from other drivers



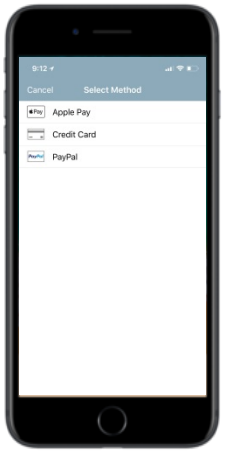
Tap to Charge

Access station with phone (no physical card needed)



Payment Sources

Compatible with Apple Pay, PayPal, and credit cards



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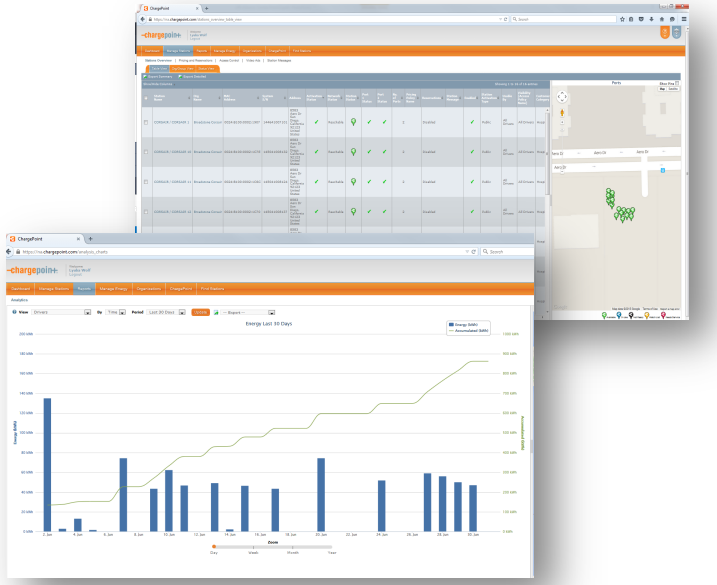
EV Charger Owners Control with Web Portal

- EV charging station owners can:
  - Give drivers access to stations
  - Set pricing policies
  - Enable/disable features
  - Track energy usage, environmental impact, and revenue.
  - Get notifications for maintenance issues



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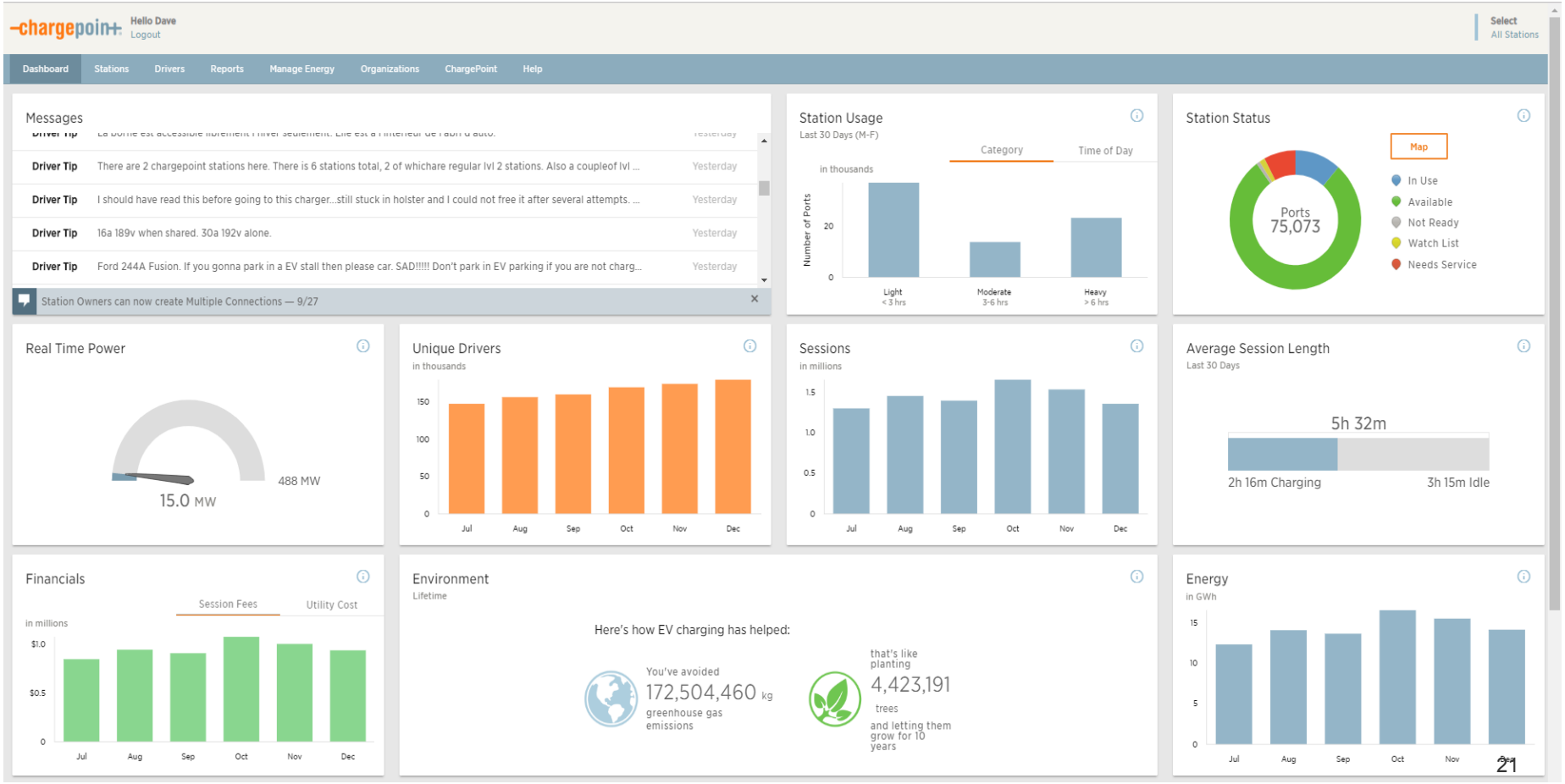
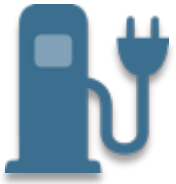
ChargePoint Portal Dashboard



Level 1 Charging

Smart Charge America

- Charging at 110 Volts AC – Similar to domestic electric outlet
- Installation cost as high as Level 2 – No real savings
- Inconvenient for drivers – Need to carry charger in the car
- Limits charging to one car per day
- **Poor Solution** – To get any serious charge from a Level 1 station you have to be plugged in for a whole day or more



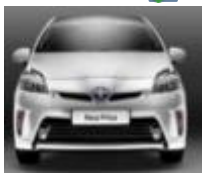
90+ Hours
Tesla Model S ☒

18+ Hours
Nissan LEAF ☒

11+ Hours
Chevy Volt ☒

18+ Hours
BMW i3 ☒

6+ Hours
Toyota Prius ☑



Bottom line: Dissatisfied drivers, no real savings, no control or visibility, and no way to monetize your asset.

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Level 2 Charging

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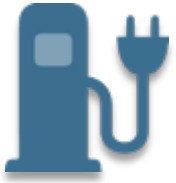
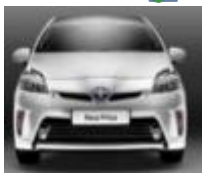


- Charging at 240 Volts AC
- Installation cost as low as Level 1 or Low Amp DC!
- 6 times faster than Level 1
- Convenient for drivers—no need to carry travel cord
- Charges fast enough to align with top-off model
- Most widely adopted solution

Tesla Model S	Nissan LEAF	Chevy Volt	BMW i3	Toyota Prius
6+ Hours ✔	3+ Hours ✔	2+ Hours ✔	3+ Hours ✔	1+ Hours ✔
				

Networked Solution – compatible with all electric cars on the road today.

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Level 3 – DC Fast Charging

Smart Charge America

+ Charging at 480 Volts
+ DC to DC charging
+ 6 X faster than Level 2

CHAdeMO	SAE Combo – CCS	Tesla Supercharger
		
 Nissan LEAF  Mitsubishi MiEV	 BMW i3  Chevy Spark	 Tesla Model S
~30 Minutes	~30 Minutes	~20 - 40 Minutes

Speed: 62.5 kW station provides 200 RPH (estimated miles of Range Per Hour).

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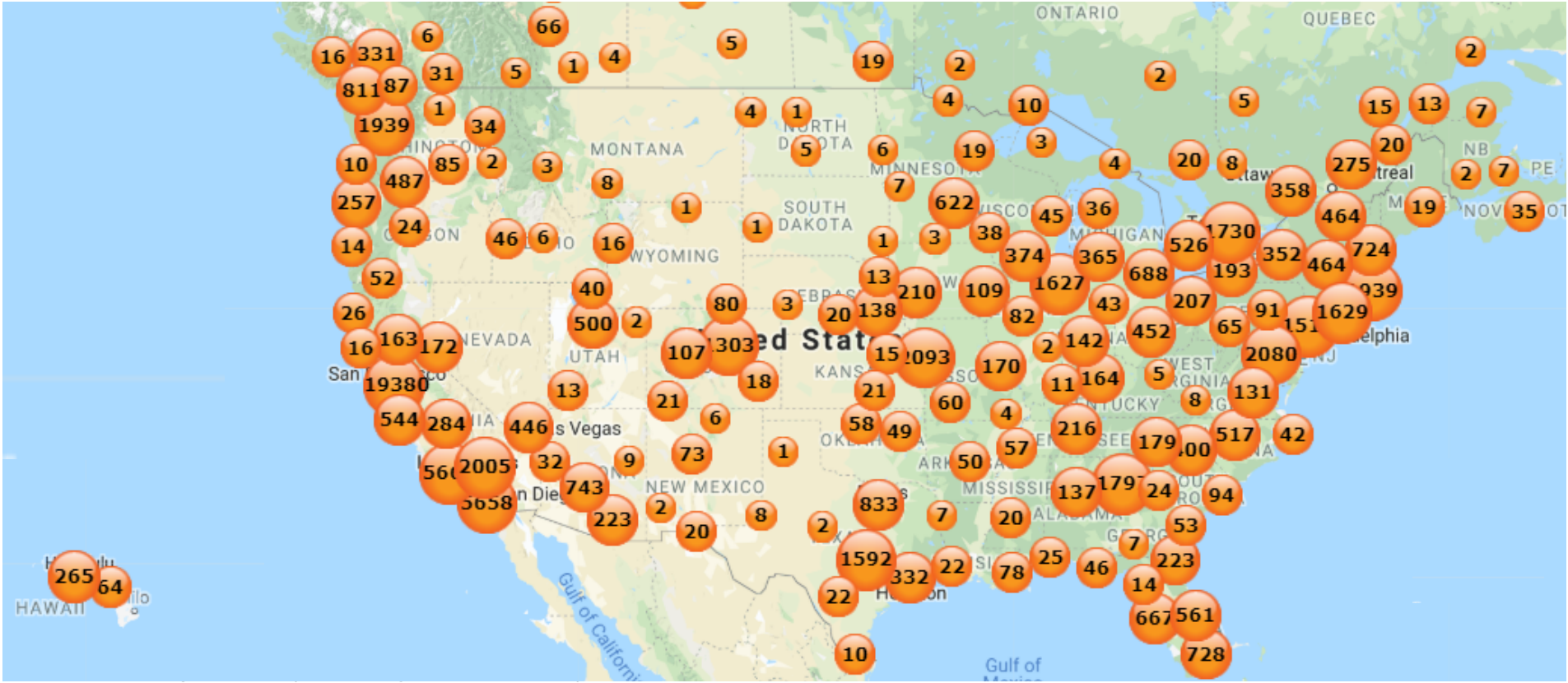
100,000+ ChargePoint Stations



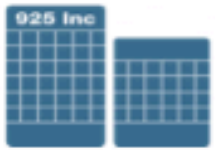
Smart Charge America

Benefits by Market Segment

Workplaces

Attract & Retain Talent

+ Employee perk saves on gas
+ Increase productivity
+ Sustainability goals



Retail Hospitality

Increase Sales

+ Increase shopping time
+ Increase repeat visits
+ Attract new customers

Commercial Property

Attract New Tenants

+ Increase property value
+ Competitive differentiator
+ LEED Sustainability goals

Multi Family Homes

Attract & Retain Residents

+ Reduce vacancy rates
+ Added amenity
+ Competitive differentiator
+ Green image
+ LEED Points

Parking

Attract New Customers

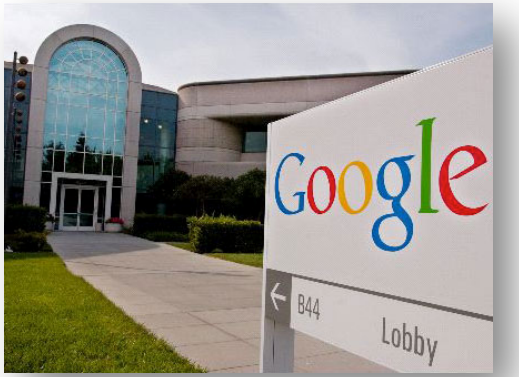
+ Drive revenue
+ Breakeven 5-7 years

Fleet

Lower cost of transportation

+ Lower carbon footprint
+ Sustainability goals
+ Green image

Workplace – Case Studies



Corporation 1: Attract and Retain Perk

+ Offer charging as perk to employees
  - Attract and retain good employees
  - Offer charging as a perk exclusively to employees
  - Energy costs as benefit to the employees

Corporation 2: Cost Effective Benefit

+ Offer charging as benefit but recover costs
  - Attract and retain good employees
  - Recover deployment cost over time
  - Transfer the energy cost to the drivers

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Retail – Case Studies

Example 1: Attract and Retain Customers

+ Increase “Dwell” time for shopper so they spend more money
  - Average shopper spends 22 minutes inside the store
  - Goal was to increase it by 50 percent, so instead of 22 minutes, get EV driver to stay for about 33 minutes
  - After putting six charging stations, they found that EV drivers stayed 77 minutes shopping in the store

Example 2: Attract and Retain Real Customers

+ EV Drivers staying more than 2 hours at charging stations, some as much as 8 hours
  - Not sure if all these people are their customers
  - Retailer decided to use Flex Billing and offer free charging for the first two hours and after that, to charge $5.00 per hour for parking there

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Multi-Family - Challenges

- Parking spaces are in a common area, even if parking is assigned
- The electricity source is in a common area, not near a driver's personal electric panel. So how is electricity usage measured and who pays for it?
- The electricity source has limited capacity
- Community's EV charging policy must be fair to all residents that want charging today and in the future

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What does it mean for the EV Driver?

- 90% of EV drivers charge at home, so the property must install chargers, or the driver must gain approval from management to install
- Drivers must be able to track their usage and reimburse property for electricity (or agree to flat monthly fee)
- When electrical capacity is limited, charging equipment must be **power management capable**, so more cars can charge without expensive infrastructure upgrades

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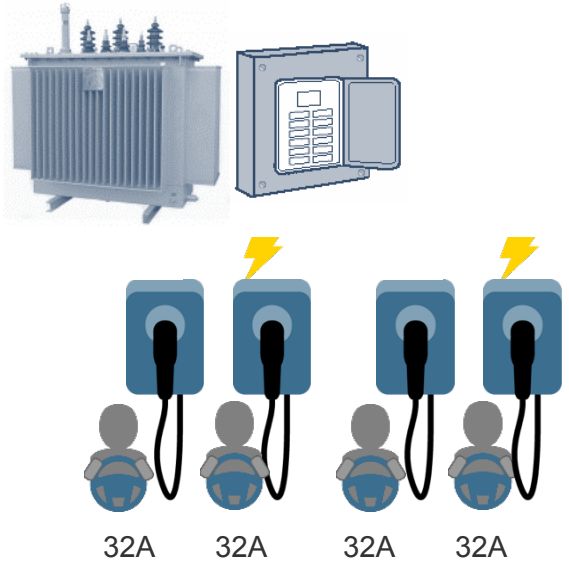
Serve More Drivers with Power Management

- Imagine you have enough capacity to charge 2 cars at the same time at full power.
- But you want to serve more than 2 drivers
- Power Management allows you to install more stations than would otherwise be supported by the electrical service
- Cars charge normally, up to the point where capacity would be exceeded
- Power is intelligently distributed to ensure the aggregate load does not exceed the available capacity
- As cars finish charging the power is rebalanced
- **Chargepoint allows 4 to 1 charger ratio**



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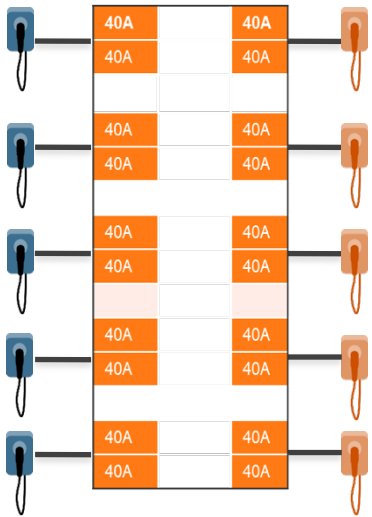
Panel Share

- Panel Share is where the power is managed to the capacity of the panel and ensures that the aggregate load of the ports does not exceed the capacity of the panel
- Example:
  - A 200A (single phase) panel supports up to 5 40A circuits at full power.
  - Panel Share allows you to install more than 5 stations and manage the aggregate load



200 Amp Panel

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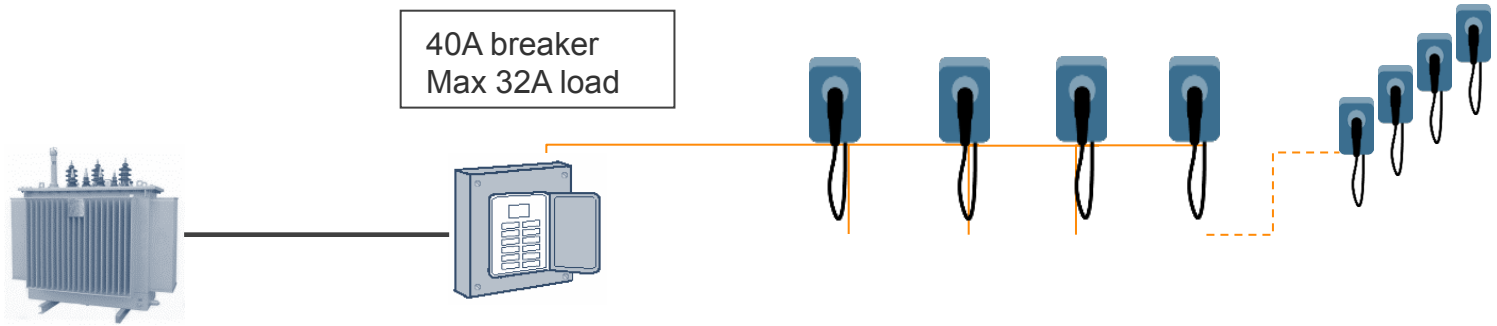
Circuit Share

- Circuit Share is where the power is managed at the breaker, allowing multiple ports to be installed in parallel (daisy chained) on a single circuit. This saves on infrastructure cost as not every port requires a dedicated breaker and dedicated wiring to the panel
- When one vehicle is charging it has access to all of the power
- When multiple vehicles are charging the power is intelligently distributed between the ports
- Alternatively, cycle through vehicles one car at a time at full power, allowing several EVSE to be installed on a single circuit



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Multi-Family Shared & Community Charging

Personal Charging

+ **Personal charger** in assigned spot
+ **Used exclusively** by one driver
+ **Driver pays** $19.95 monthly service

CPF50 + CPGW Gateway
Multi-Family Home Service
$1500 Purchase Price

Community Charging

+ **Shared charger**, common area parking, guests, leasing office
+ **Drivers take turns** charging
+ **Austin Energy pays** for network plan

CT4000
Commercial Network Plan
$7000 Purchase Price

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Stations for Every Situation

Smart Charge America

Single Family Home

Home
Level 2

Multi-Family, Fleet

CPF50
Level 2

Commercial/Municipal, Mixed Use

CT4000
Level 2

On-Route, Commercial

CPE250
62.5kW

Fast DC Chargers

Express Plus
500kW

Ultra-fast DC Chargers

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ChargePoint Level 2 Stations – Six Flavors

Smart Charge America

+ **Dual Port Level 2 Charging Stations**
  - Standard= 6’ tall with 18’ cords
  - Tallboy= 8’ tall with 23’ cords

+ **Single Port Level 2 Charging Stations**

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Commercial Level 2 Charging Stations

Charging for businesses and municipalities that want to offer charging to employees, customers and visitors

+ **Speed**: 25 RPH (estimated maximum miles of Range Per Hour of charging).
+ **Clean Cord Technology**: Self-retracting, maintenance free and ultra-lightweight cord management system.
+ **Power Management Options**: Smart Cloud Technology helps avoid costly electric infrastructure upgrades and doubles the number of parking spots served.
+ **Branding and Customization**: Promote your brand with an LCD screen and customizable signage.

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Networked vs. Non-Networked Stations

Smart Charge America

Capability	Networked Chargers	Non-Networked Chargers
Charges Electric Vehicles	✓	✓
Charging Station Map Visibility to drivers (through mobile app, in-dash navigation)	✓	x
Ability to charge money and recover cost (by kWh, hours of usage, time of use, etc.)	✓	x
Control Access (employees only, public, loyalty rewards)	✓	x
Remote access and maintenance (check status, availability, etc.)	✓	x
Analytics (usage, # of unique drivers, charging behavior, utilization, revenue, and costs)	✓	x
Sustainability reporting (GHG savings, fuel savings)	✓	x

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Networked Charging Stations

- ✓ **Authenticate** drivers
- ✓ **Measure** electricity use
- ✓ **Bill** residents for their usage
- ✓ **Show** station availability and notifications
- ✓ **Set** over-stay parking fees, Waitlist and Valet
- ✓ **24**-hour support for drivers
- ✓ **Power Management** allows 4:1 charger ratio
- ✓ **Integrated** Video Screen

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Networked-Optional Hardware - EVBox

Smart Charge America

Smartphone but No tap-to-charge for iPhone or Android

Not future-proof or driver-friendly

Requires drivers to request a **card** or navigate through **app** every time

Stations can run multiple networks –drivers have no way of knowing which app to use

No screen, just an LED Ring

Minimal communication with driver

Can't even display basic information such as network, pricing, status, or user restrictions

BusinessLine is not a true dual station

Make sure to clarify pricing **per station** or **per port** in quotations

Dual is two units mounted together

"Cable management" is via coiled wire, 18ft total

No bollard for support, only thin pole which **inventory is low and has been causing long lead times**

EVBOX

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Non-Networked Hardware - ClipperCreek

- Established provider
- 1,000s of stations installed
- Only non-networked
- Home and commercial charger options
- No cord management

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Austin Energy's (AE) Plug-In Everywhere (PIE) Program

COMMUNITY CHARGERS

- ✓ AE gives 50% rebate off total project (up to $4,000) for approved Level 2 (240V) charging stations and up to $10,000 for Level 3 (480V) DC Fast Charging stations
- ✓ AE pays for all electricity usage, since users "pay at the pump"
- ✓ AE pays the $280/year per port for cellular networking ($560/yr dual-port)
- ✓ AE pays for all station preventive maintenance
- ✓ Drivers already have the AE PIE and pay only $4.17 per month for Unlimited Use!

PERSONAL CHARGERS

- ✓ $1200 rebate for a Wireless Networked Charger
- ✓ $900 rebate for a Non-Networked Charger

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Assure Worry Free Warranty

Station Maintenance Options

Maintenance Option	Parts Only Warranty	Assure
Availability	One year included for free on all stations installed by a ChargePoint certified installer*	Available for purchase for up to five years. Stations must be installed and validated by a ChargePoint certified installer.
Parts Covered	Defective parts are exchanged	Included and coordinated by a ChargePoint support specialist
Certified On-Site Labor	Not included: station owner must find a ChargePoint certified installer to perform any repairs	Included and coordinated by a ChargePoint support specialist
Monthly Station Summary Report		Included
Detailed Quarterly Reports		Included
Uptime Guarantee		98% with non-performance penalty
Proactive Monitoring		Included
Service Level Agreement		1 business day response time 1 business day from parts arrival for on-site labor
Labor Coverage		Included for damage caused by accidents, vandalism and excessive wear and tear
Unlimited Station Configuration		Included

* Installations not performed by a ChargePoint certified installer are not covered under warranty.

Questions?

Smart Charge America

Thank You!

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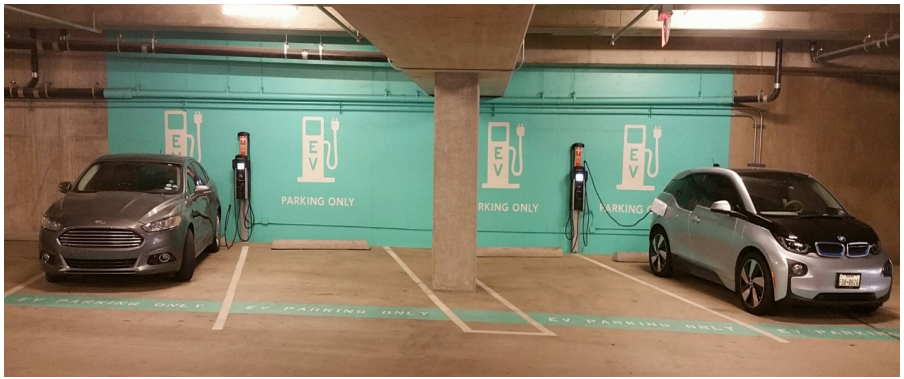

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