EV informational materials for PEEC

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FREQUENTLY ASKED QUESTIONS

Can I travel long distances across country, with a purely electric vehicle?
YES, with an extensive fast charging Supercharger network (Tesla) and a growing Electrify America CCS network (all EVs), driving anywhere in the US is easy. See Slides 3 and 4 to see just how extensive the fast charging network is already! It's only going to grow.

If so, how much does it cost and how long does it take to charge at each stop?
A typical trip using Tesla Superchargers is shown in Slide 4. For the trip shown it was $88 in "charge" to drive from Los Alamos to Los Angeles, spend a week, and come back, about 2000 miles total. Electrify America's rates (all EVs) are similar. Average charging times are currently around 30-45 minutes per stop but soon will be even shorter. See Slide 5.

What is the current range for electric vehicles on a full charge? Does it change with speed and temperature?
Several EVs now have ranges of over 200 miles, a handful over 300 miles. However, unlike a gasoline car, electric car range is much more dependent on speed and weather. Extreme cold and windy conditions both decrease range. There's a graph showing range versus speed on Slide 6. In nice weather, at a speed of 55 mph, you can now travel around 375 miles on a single charge with a Tesla Model 3 or Tesla Model S.

Overnight charging for day-to-day use is recommended right? Where can I plug in? Do you need a special charger? Does it cost a lot to install a special charger?
Most EV owners typically plug in overnight to top off their batteries; we think of our cars like cell phones. You can charge an EV overnight at home using a standard 120V plug (Level 1 charging) or have an electrician install a 240V option for faster (Level 2) charging (like an electric clothes dryer outlet). In Los Alamos, you can also charge at the County EV chargers or, if a LANL employee, at the ChargePoint stations in the lab's parking garages. See Slides 7 and 8 for Apps you can use to locate charging options when you're not home.

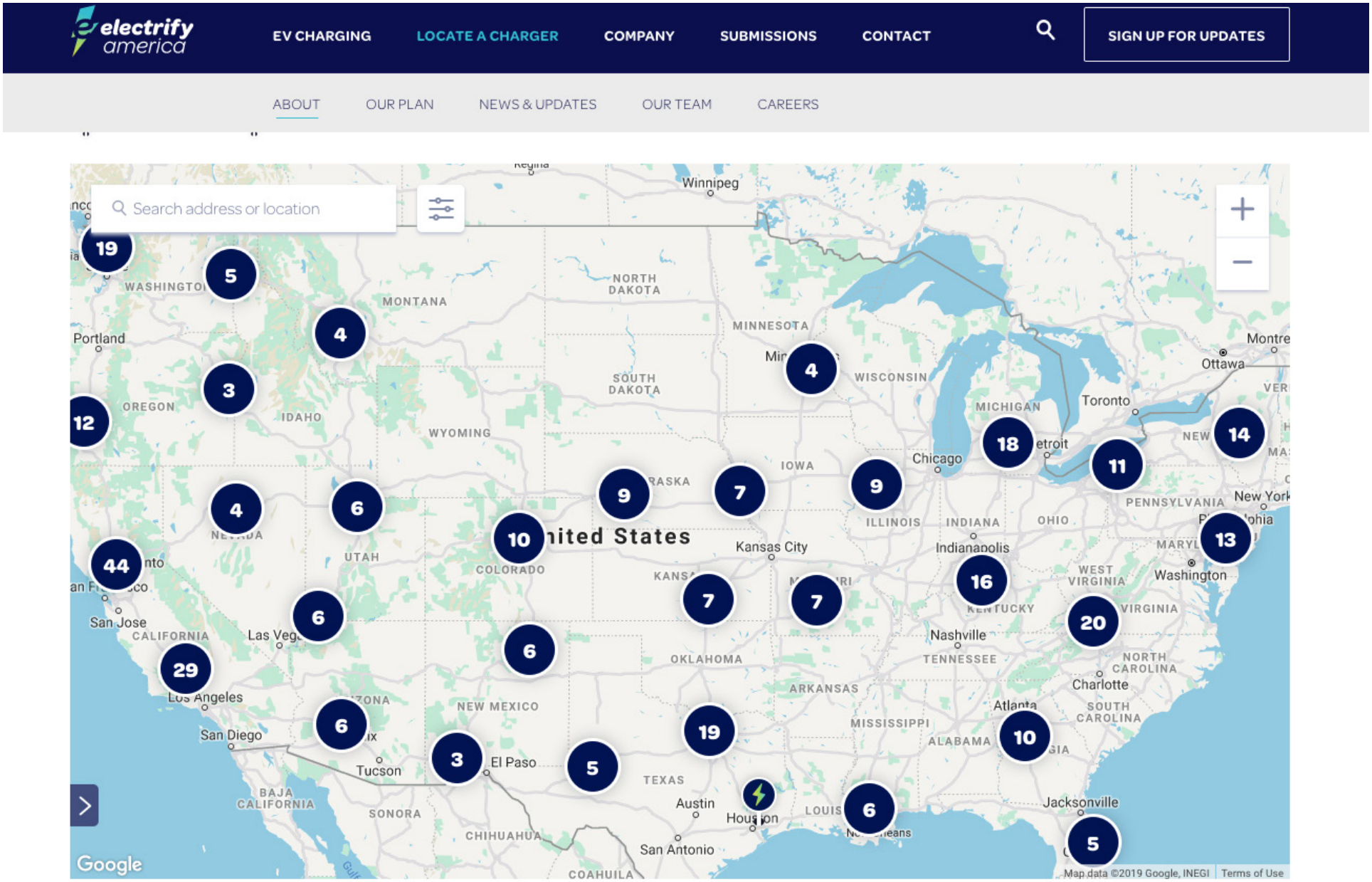
FREQUENTLY ASKED QUESTIONS

How much does one typically spend on charging at home in a month? How many miles of range can I expect from overnight charging from just a wall socket I have outside? How adaptable are the charging options for an EV?
The white Tesla Model 3 (with the red striped rims) on display was charged overnight on a convenient 120V/20A outside outlet for its first year. Overnight charging added about 70 miles of range (about perfect for Los Alamos commuting) and the added increased cost to the owner's electric bill for a month? About $30. Slides 9 and 10 show you a huge variety of adapters that are available for plugging in your EV almost anywhere. Want to pitch a tent in an RV park? Plug your car in overnight and get a free full charge while you sleep. Going to a friend's house who lives in a remote area? An electric dryer outlet in the garage is perfect for plugging in. There's an adapter for everything. Adapters are $35 each.

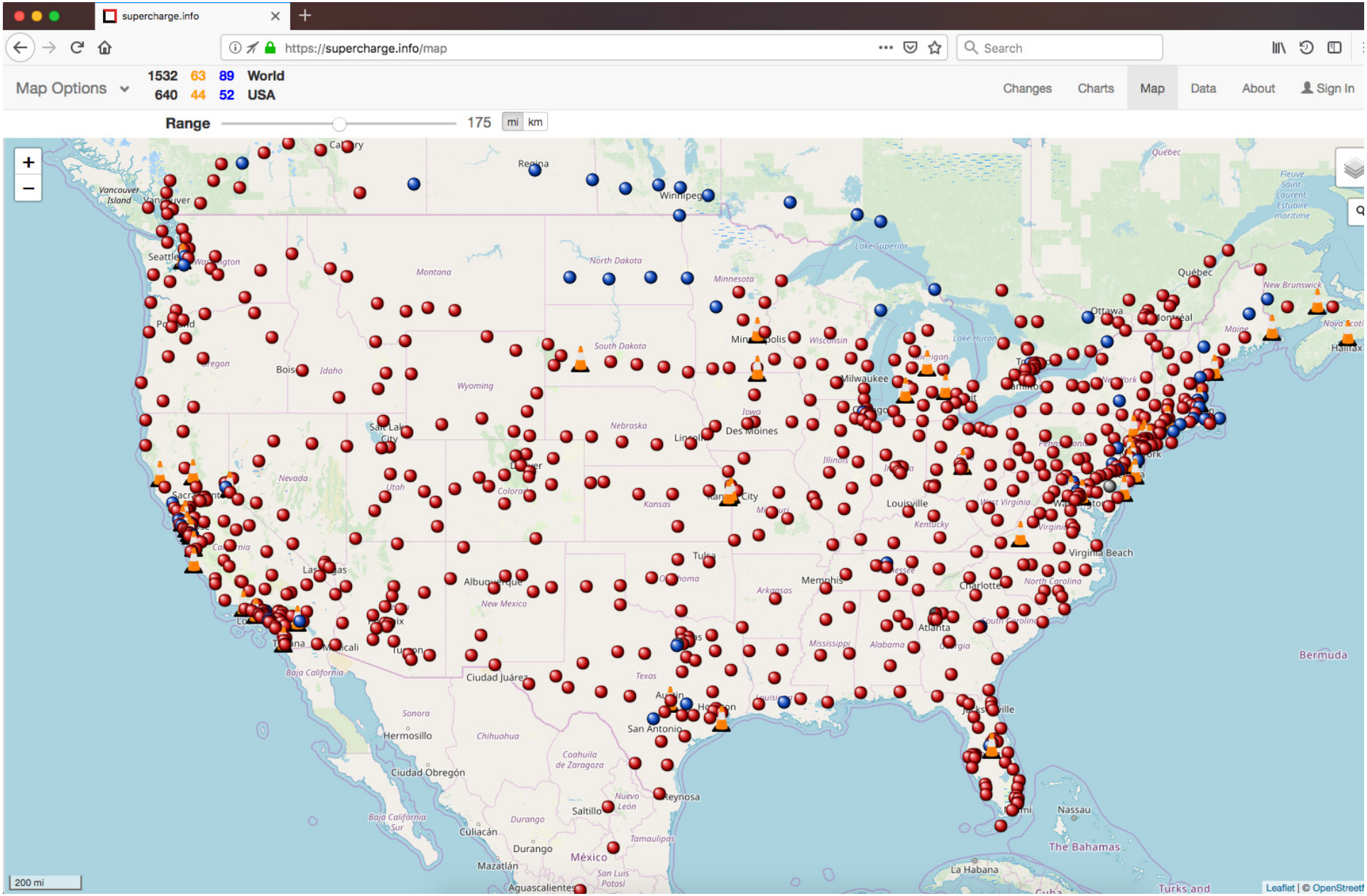
Are EVs really greener? I hear it takes a lot of CO2 just to make the battery? Isn't most of the electricity we buy generated from dirty coal power plants?
Yes EVs are greener and getting greener all the time. It does take about 6 Metric tons of CO2 to manufacture a long range battery for an EV like a Tesla Model 3. (A gas tank costs almost nothing to produce.) But after about a year's driving, the EV's CO2 emissions reach parity with the gasoline car's CO2 emissions. Over the lifetime of the car the EV's CO2 emissions are dramatically less, as shown in Slide 11. Plus, there are no hydrocarbons emitted from an EV ever, none, zero, zilch.

As for electricity coming from dirty coal fired plants, in Los Alamos county, roughly 40-45% of our electricity is already renewable (hydro, wind, solar). Plus, Los Alamos county has a program where you can buy renewable energy credits and not get ANY of your electricity from coal! Details on Slide 12. (The entire LA Green flyer is available online for more details.) Or, you could install a solar system on your roof and generate your own electricity and feed what you don't use back into the grid.

Present Day Electrify America Fast Chargers in the US (all EVs)



Present Day Tesla Supercharger locations in North America



TYPICAL CROSS-COUNTRY TESLA EV TRIP

END OF TRIP

Santa Fe, NM Supercharger
6/17/2018 8:57PM
$4.84

Gallup, NM Supercharger
6/17/2018 5:28PM
$6.60

Flagstaff, AZ Supercharger
6/17/2018 10:19AM
$7.26

Kingman, AZ Supercharger
6/16/2018 10:00PM
$7.15

Barstow, CA Supercharger
6/16/2018 6:12PM
$11.70

Hawthorne, CA Supercharger
6/15/2018 4:24PM
$4.94

Redondo Beach, CA Supercharger
6/10/2018 11:35PM
$5.72

Barstow, CA Supercharger
6/10/2018 7:06PM
$12.48

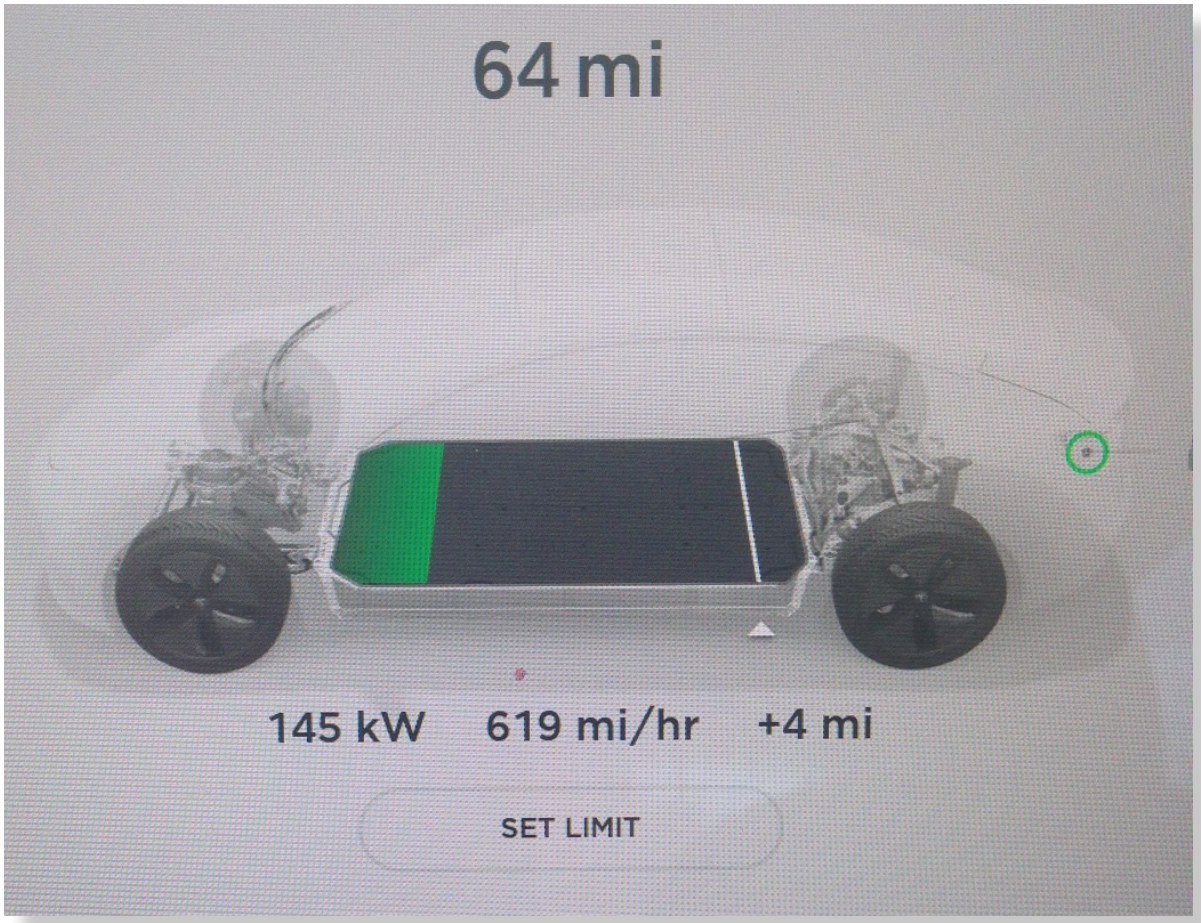
Needles, CA Supercharger
6/10/2018 4:27PM
$10.40

Flagstaff, AZ Supercharger
6/10/2018 11:54AM
$9.57

Gallup, NM Supercharger
6/10/2018 9:22AM
$6.82

Albuquerque, NM Supercharger
6/10/2018 7:02AM
$1.32

Top up in Albuquerque; START



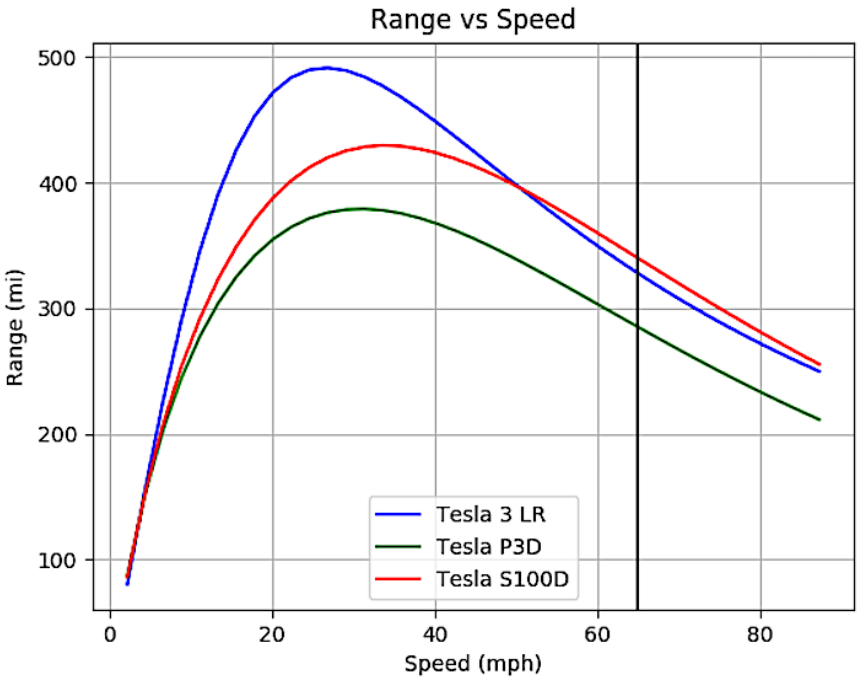
$88. The charging costs of a trip from Albuquerque to Los Angeles and back to Los Alamos using Superchargers.

About 30-45 minutes. The current average time spent charging up at a Supercharger stop. Soon to be even faster.

500+ miles. The rate you can add range to a nearly empty battery per hour. More with Version 3 Superchargers.

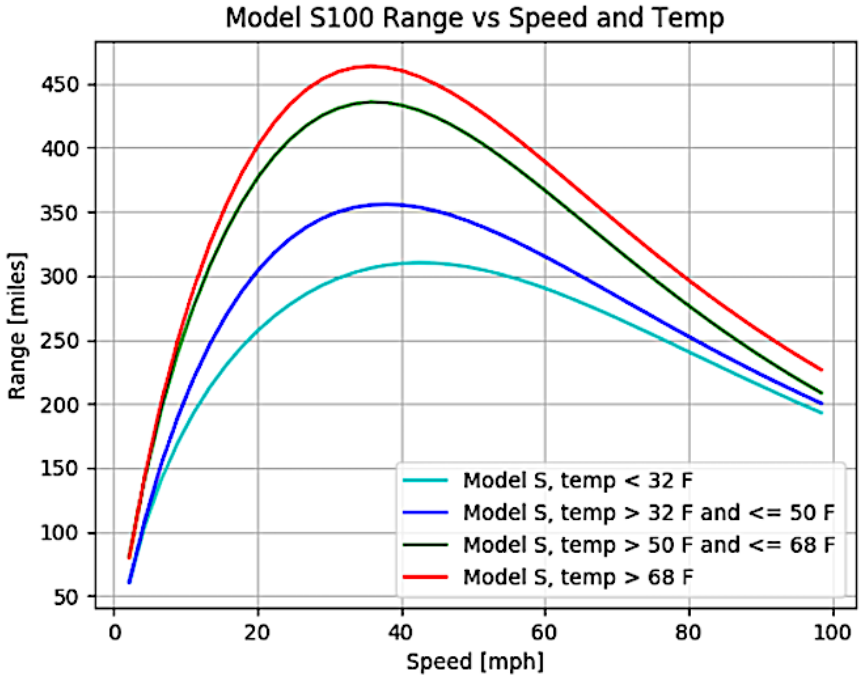
EFFECTS OF SPEED AND TEMPERATURE ON RANGE

Top: Range of 3 different EVs vs speed



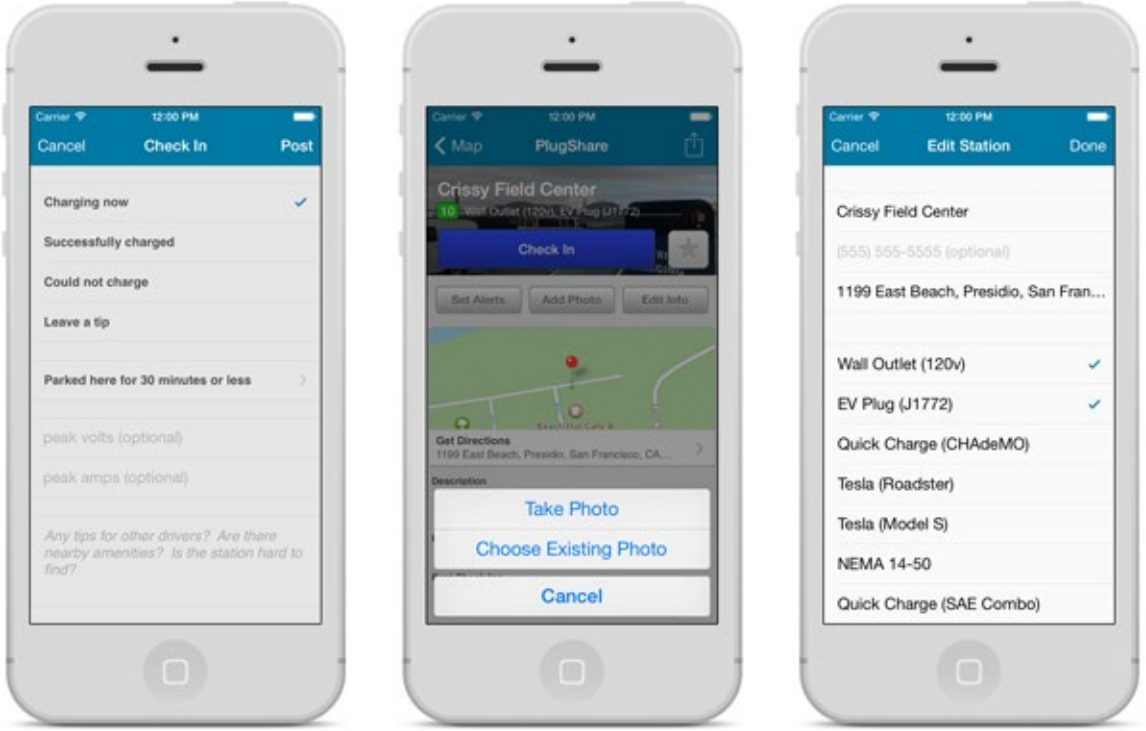
Bottom: Range versus speed of a Tesla Model S at 4 dif-ferent tempertures

(data taken from ABetterRoutePlanner.com)



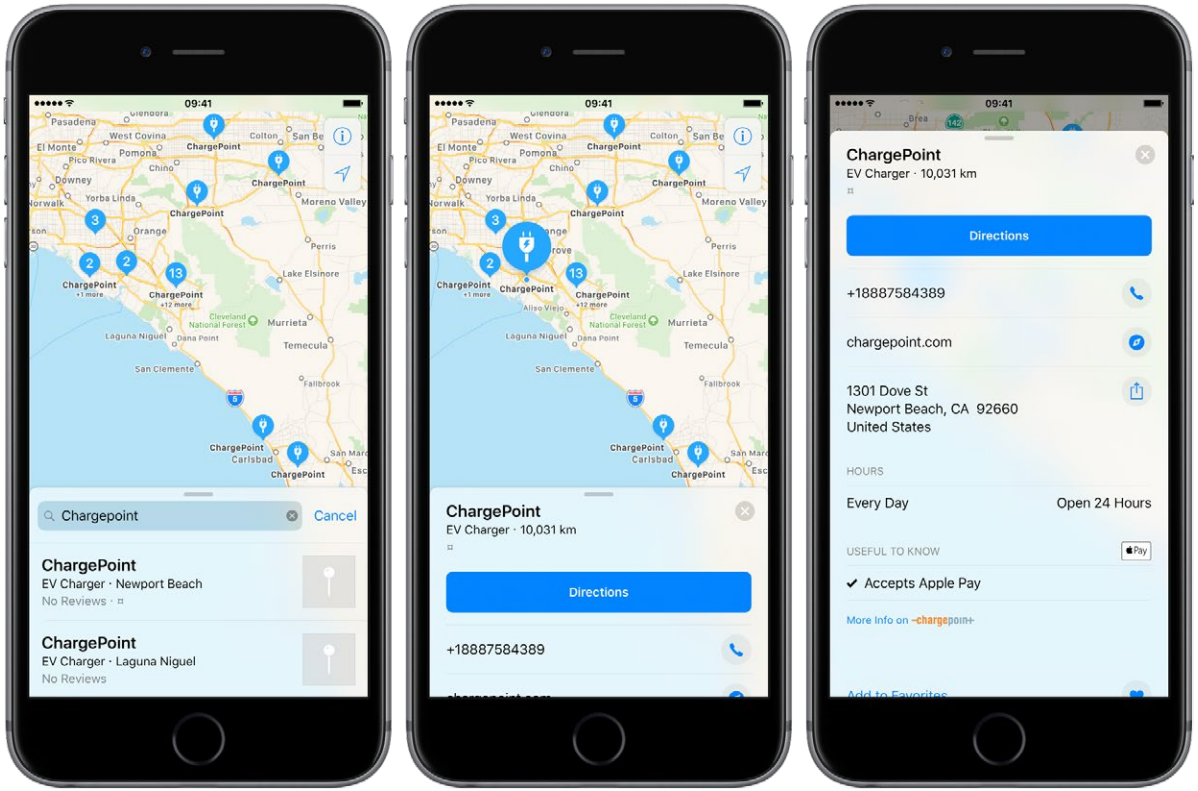
APP for easily finding other places to plug in

PlugShare



Another APP for easily finding other places to plug in

ChargePoint



ADAPTERS FOR ANY KIND OF PLUG (Tesla)

Gen 2 NEMA Adapters

https://shop.tesla.com/us/en/product/vehicle-accessories/gen-2-nema-adapters.html

electrify america map

TESLA | SHOP

CHARGING VEHICLE ACCESSORIES APPAREL LIFESTYLE SIGN IN

Quantity

- 1 +

Add to Cart

Description

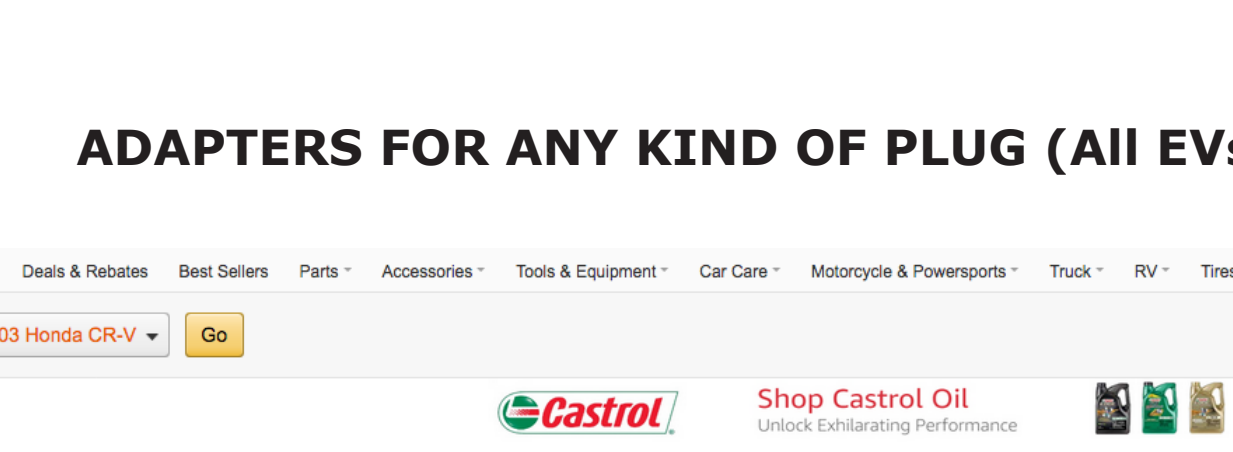
Tesla offers adapters for the most common outlet types. To charge from an outlet, attach the appropriate adapter to your Mobile Connector, plug into the outlet and then the vehicle. Charging speeds and power supply information will be displayed on the touchscreen of the vehicle. Below is a full list of available NEMA adapters for the second generation Mobile Connector and approximate charging speeds for Model S, X, and 3.

Gen2 NEMA Adapter	Voltage/ Circuit Breaker	Miles of range per hour of charge		
		Model 3	Model S	Model X
14-50*	240V / 50A	30	23	20
6-50*	240V / 50A	30	23	20
14-30	240V / 30A	22	17	14
10-30	240V / 30A	22	17	14
6-20	240V / 20A	15	11	8
6-15	240V / 15A	11	7	5
5-20	120V / 20A	4	4	3
5-15	120V / 15A	3	3	2

ADAPTERS FOR ANY KIND OF PLUG (All EVs)

Automotive | Your Garage | Deals & Rebates | Best Sellers | Parts | Accessories | Tools & Equipment | Car Care | Motorcycle & Powersports | Truck | RV | Tires & Wheels | Vehicles

Find parts for your: 2003 Honda CR-V Go



Automotive › Tools & Equipment › Garage & Shop › Electric Vehicle Charging Equipment › Charging Stations

Roll over image to zoom in

Zencar Level 2 EV Charger(100-240V,16A,25ft+3ft) Portable EVSE Home Electric Vehicle Charging Station Compatible with Chevy Volt, Nissan Leaf, Fiat, Ford Fusion (NEMA6-20 with Adapter for NEMA5-15)

by Zencar

4.4 out of 5 stars 291 customer reviews | 215 answered questions

Price: $199.99 prime

Thank you for being a Prime member. Get $70 off instantly: Pay $129.99 upon approval for the Amazon Prime Rewards Visa Card. No annual fee.

Size: **28ft NEMA6-20Plug(NEMA5-15 Adapter)**

NEMA 5-15 Plug | NEMA 6-30 Plug | NEMA 6-50 Plug | NEMA 10-30 Plug
NEMA 10-50 Plug | L 14-30 Plug | NEMA 14-30 Plug | NEMA 14-50 Plug
20 Feet Extension Cable | **28ft NEMA6-20Plug(NEMA5-15 Adapter)**
32A NEMA 14-50 Plug | 32A&24A&16A Adjustable 14-50 Plug

Want this product professionally installed?
Book a top-rated pro directly on Amazon. Backed by our Happiness Guarantee.
Estimate$625.00

- A STANDARD 120V (NEMA 5-15) ADAPTER -- Sometimes, Zencar level 2 EV charging in your garage is not an option. That's why we created an EV charging set that includes a Level 1 adapter cable meet with common outlet in your house. The 3 feet long adapter enables you to charge your electric car via a standard 120V (NEMA 5-15) wall plug.
- 3.86 KW/H FASTER CHARGING SPEEDS (without adapter): With level 2 charging, most electric vehicles will charge up to 11 miles per hour. Our level 2 EVSE features 240V, 16 Amp charging and up to 3x faster with a 220 volt
- WORKS WELL WITH ANY EVS -- Zencar level 2 ev charger tested with Chevy Bolt EV, Chevrolet Volt, BMW i3, Nissan LEAF, Toyota Prius Prime, Ford Fusion Energi, Ford C-Max Energi, Fiat 500e, Chrysler Pacifica Hybrid, Tesla Model S, 3, and X (*with Tesla supplied adapter) and many more.
- MULTIPLE PROTECTION -- The EVSE providing lightning-proof, leakage, overvoltage, overheat,

Total lifetime CO2 emissions

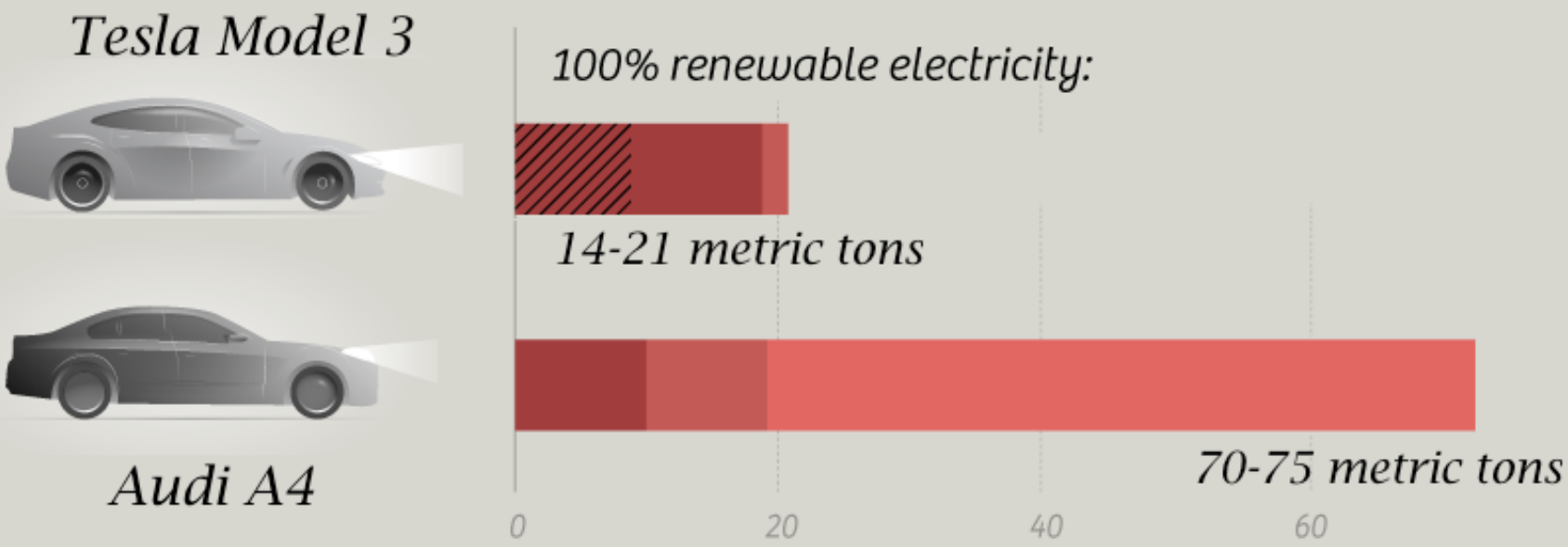
*Over the life of the vehicle** *(15,000 miles per year for 10 years)*

= *battery manufacture*

= *manufacture, maintenance, and end-of-life recovery*

= *fuel production*

= *vehicle use*



Adapted from https://thecorrespondent.com/7056/why-electric-cars-are-always-green-and-how-they-could-get-greener

FREQUENTLY ASKED QUESTIONS (continued)

WHO CAN PARTICIPATE?
Any residential or commercial customer who receives electricity from the Dept. of Public Utilities can elect to participate.

WHAT ADDITIONAL RATES WILL MEMBERS HAVE TO PAY?
It depends on the program that you select. If you are a residential customer or a small commercial customer, you can choose to purchase ***LA Green*** in blocks of 100 kilowatt-hours at a premium of 50 cents over the existing rate. Large commercial customers are offered the option of selecting 1, 2, 3, 5, 10, 50 or 90 percent of monthly usage as the base upon which to compute the ***LA Green*** premium of a half cent per kilowatt-hour over existing rates.

Example: If a residential customer whose monthly electric consumption is 500 kilowatt-hours chose to join ***LA Green*** at the single block level (100 kilowatt-hours), twenty percent of this customer's electric consumption would be covered by ***LA Green*** for an additional 50 cents per month over the normal electric bill.

Example: If a large commercial customer's monthly electric consumption is 10,000 kilowatt-hours and the customer chose to join ***LA Green*** at the 10 percent level, (1,000 kilowatt-hours) the additional monthly charge for ***LA Green*** would total $5.00 on top of the normal electric bill.

WHAT IF I WANT TO CANCEL?
Customers can cancel at any time. Email, call or visit the Dept. of Public Utilities/Customer Care Center at CustomerCare@lacnm.us, 662-8333 or 1000 Central Ave.

If the cancellation notification is received less than 1 day before the next billing cycle, the cancellation will be applied to the following billing cycle.

HOW DO I SIGN UP or LEARN MORE?

Call the Dept. of Public Utilities at 662-8333, email us at CustomerCare@lacnm.us, or visit the Customer Care Center at 1000 Central Avenue. Let us know which option of ***LA Green*** you would prefer and we will confirm the amount and the effective date. Charges for ***LA Green*** will be reflected on your bill. You may cancel at any time.

To better understand how Renewable Energy Credits (RECs) work, please view DPU's brief animated educational video,

http://www.youtube.com/watch?v=bHgj6MB4UxU

Think LA Green for a cleaner & greener New Mexico.

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1000 Central Ave., Suite 130
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505-662-8333 | CustomerCare@lacnm.us

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