

# BUSINESS

SUNDAY, AUGUST 28, 2011 :: LATIMES.COM/BUSINESS

## CONSUMER GUIDE TO ELECTRIC VEHICLES



ALLEN J. SCHABEN Los Angeles Times

**PLUGGED IN:** The Malibu Country Mart unveils its first electric vehicle charger at a ribbon-cutting ceremony earlier this month. Owning an EV is not practical, however, without a home charger. That rules out most apartment and condo dwellers for now.

# WANT TO ROLL ELECTRIC?

The complete guide to EV ownership: the models, the costs, the incentives, the pitfalls, the places to recharge. See if it's right for you.



ALLEN J. SCHABEN Los Angeles Times

### INSIDE

- A lineup of electric vehicles and plug-in hybrids. **Page 8**
- Public chargers pop up across California's major cities. **Page 9**
- For complete coverage, go to [www.latimes.com/electric-vehicles](http://www.latimes.com/electric-vehicles). Jerry Hirsch will be answering readers' questions about electric vehicles in a live online chat at noon Tuesday. Go to [latimes.com/business](http://latimes.com/business) to take part.

### JERRY HIRSCH

Electric cars are back.

Popular in early automotive history, electrics quickly got smoked by their internal combustion-driven cousins.

But in this age of volatile gas prices and climate worries, these clean, quiet vehicles are winning new fans. Advances in technology have improved their range and power. Companies are rolling them out in every flavor.

Need a small SUV? Take a look at the Toyota RAV4 electric hitting the market next year. How about a luxury sedan? There's the Fisker Karma plug-in hybrid, which the automaker compares to a Maserati Quattroporte but with better mileage and lower emissions than a Toyota Prius. Do you lean toward small, practical sedans that seat five? The Nissan Leaf may be your ticket.

Although existing offerings and the EVs about to come out are comparable to many conventional gasoline-powered vehicles in virtually every aspect but range, they aren't for everyone.

Here's what to consider if you are thinking of making an electric vehicle or plug-in hybrid your next drive.

**Be prepared to pay more:** A glance at the sticker prices says it all. You are going to pay more for the privilege of being able to zip along powered by electrons rather than fossil fuel. The cost of a home charging station adds an expense you don't have with a gasoline car, but it does add convenience.

[See EV, B9]

# Public EV chargers popping up across California's major cities

TIFFANY HSU

Public electric vehicle chargers are cropping up across California's major cities, emerging in parking garages, near subway stations, alongside roads, and at shopping centers and office buildings.

The idea is to soothe range anxiety—the fear that EV batteries will abruptly die, leaving drivers stranded without a power source. Public chargers could also help attract apartment dwellers to try out electric vehicles.

Many are fast-chargers, which can juice up a dead battery in less than half an hour. The rest will be the slower Level 1 and 2 chargers, which most drivers will use as a stopgap until they get home to their garage chargers.

Many of them are also free to use—for now. Government and private companies are contemplating how to charge for electricity once more people begin driving electric vehicles.

In addition to new installations, hundreds of Southland chargers that were set up in the last electric vehicle rush in the 1990s are in line for upgrades.

Newer and upgraded chargers are all standardized to be compatible with the latest EVs.

But outside of eco-minded communities such as Santa Monica, drivers are complaining that public chargers remain in short supply, especially for long-haul trips to Las Vegas and the Bay Area.

Many older charging stations installed a decade or two ago are defunct or have been removed for lack of use.

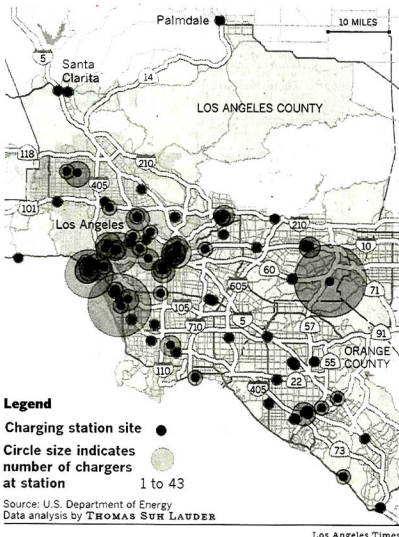
In a chicken-or-the-egg situation, government and company officials are waiting for EV demand to pick up before spreading out more chargers, while drivers are waiting for the infrastructure to improve before buying EVs.

For now, many government buildings and businesses plan to allow free charging to encourage EV adoption.

Through 2013, drivers will be able to charge up for free at city-owned stations in San Francisco—including

## Car charging stations

Public chargers for electric vehicles are concentrated in Los Angeles and Santa Monica but are gradually being installed or upgraded across the region.



the airport and public libraries.

Companies such as Google Inc. are setting aside premium parking spaces equipped with chargers for employees with EVs. Retailers such as Wal-Mart Stores Inc. and Ikea are reserving EV parking spots for workers as well as shoppers.

But daytime charging, when electricity prices are at their peak, is expensive. Operators of charging stations are considering adding the cost of charging to parking fees. Some are considering an electricity surcharge.

Planners are also considering options besides upright charging consoles linked to the utility grid.

Tesla Motors Inc. and solar panel installer SolarCity have set up four sun-powered charging stations along the 101 Freeway between San Francisco and Los Angeles. Google, which already has more than 200 chargers at its facilities, uses solar power as well.

Google is also testing in-

ductive charging systems, which can wirelessly juice up nearby EVs. The so-called proximity charging technology, from Evatran, involves a magnetic coil inside a floor-mounted pad that senses a companion device installed under the car.

German engineering firm IAV is developing a similar system of inductive loops that would be buried beneath roads, generating a magnetic field that could juice up cars driving overhead.

Some drivers want more battery switch stations, like the test version being used by electric taxis in Tokyo. Rather than waiting for a recharge, the automated system can quickly replace a dead battery with a new one.

If all else fails, there are always mobile charging stations. Starting this month, AAA will send out chargers mounted on truck beds to rescue stalled EVs with a quick boost.

tiffany.hsu@latimes.com