

CALIFORNIA:

Utility plan to add EV charging seen as market jump-start

Anne C. Mulkern, E&E reporter

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A California utility will be the first in the nation to add and run electric vehicle charging stations at businesses and multi-family homes, a move seen as part of a trend aimed at jump-starting greater EV sales.

San Diego Gas & Electric Co. (SDG&E) won California Public Utilities Commission (CPUC) approval last week for a \$45 million program to place 10 chargers at each of 350 locations, for a total of 3,500 units.

"This pilot program will provide us with a unique opportunity to support the increased adoption of zero-emission vehicles to reduce smog and other pollutants created by the transportation sector in California," said Jim Avery, SDG&E's chief development officer.

The Golden State's push to cut climate pollution is driving the move.

California wants 1.5 million clean cars on state roads by 2025, about a tenfold jump from the current number. In addition, the state's Legislature has ordered the CPUC to prod utilities to add programs that "accelerate widespread transportation electrification to reduce dependence on petroleum" and reach the goals of S.B. 350, which passed last year.

S.B. 350 mandated that by 2030, investor-owned utilities make half their electricity come from renewable sources. It earlier included language directing the state's Air Resources Board to find ways of cutting petroleum use in half by that year. That wording was stripped out before passage, following pressure from the oil industry. But language aimed at boosting EV adoption was preserved.



One of 158 electric vehicle chargers at San Diego Gas & Electric Co.'s headquarters. About 200 employees own EVs.
Photo courtesy of San Diego Gas & Electric.

It takes place as others in the West seek to boost EV sales. Avista Utilities Inc., a utility in eastern Washington, has asked regulators to approve adding charging stations at ratepayer expense. The NW Energy Coalition, an alliance of utilities, environmentalists and consumer advocates in Oregon, Washington, Idaho, Montana and other locations, just adopted resolution supporting utilities entering the charging arena.

"Everyone's looking at California to see how they're doing it," said Marc Krasnowsky, communications director with the coalition. "California's really taken the lead in vehicle electrification and solar panels, and everyone's taking a look at that."

There's been a "chicken and egg" problem in moving toward ownership of more EVs, said Gil Tal, a researcher with the Institute of Transportation Studies at the University of California, Davis.

For ownership of EV chargers to become a more profitable business, "we need a lot of electric cars to use them," he said. "But if people cannot charge at home, they will not buy the cars."

Putting chargers in multi-family housing units will push some people who hadn't considered an EV before to buy one, Tal said. But there likely will be a time lag between when the stations go in and when those new buyers purchase a plug-in. Because of that, utilities are best positioned to add the stations, he said.

Lower-income people also are eyeing used EVs now increasingly coming on the market, Tal said. That will spawn sales of new models, he said, as early adopters sell their older electric car and get the latest option.

"It will help the new car market. It will help the disadvantaged communities," Tal said of the charging station pilot program. "It's a win-win, and it's a starting point."

The nod for SDG&E's plan came two weeks after Los Angeles-based Southern California Edison Co. (SCE) received CPUC's approval to build the infrastructure for 1,500 EV charging stations. Ratepayers will fund the \$22 million cost.

SCE will build needed equipment up to the stations, then allow private companies to install the charging boxes. SDG&E, in contrast, will own and operate the stations, though it will solicit proposals from charging companies to add their brand of station. In addition to the \$45 million cost of adding the chargers, SDG&E can seek additional funding to cover running the network.

Encouraging charging with renewable power

SDG&E will combine the new stations with a rate based on when power is used. EV owners who are in the pilot will have an assigned charging space at home or work. They'll receive notices about the best times to charge.

It's aimed at helping the utility reduce power consumption at peak demand time, typically in the early evening, said Hanan Eisenman, SDG&E's communications manager. As well, he said, car owners will receive better rates for charging when there's plenty of power generated by solar and wind on the grid.

It also will help SDG&E avoid building new power plants, Eisenman said, which improves air quality and cuts greenhouse gas emissions. That helps all ratepayers, even the ones who don't own EVs.

California's utilities are on the leading edge of a trend toward utility involvement in EV charging stations, said Max Baumhefner, an attorney at the Natural Resources Defense Council (NRDC).

"We're already seeing utilities across the country coming forward with proposals informed by California's experience," he said.

Avista, based in Spokane, Wash., last month submitted a request to install 120 chargers at single-family homes, 100 more mostly at workplaces with a few at multiresidential buildings, 45 level-two fast chargers and seven DC-rapid chargers outside shopping centers and other public places.

The utility wants to study the behavior of motorists who drive all-electric cars, those who drive plug-in hybrids, and commuters and non-commuters, said Rendall Farley, Avista's manager of electrification and transportation issues.

"We see that electric vehicles are coming," Farley said. The utility wants to "support a higher rate of EV adoption," he said, and "learn about what customers need."

Incentive for utility involvement

Washington's Legislature through H.B. 1853 last year encouraged utilities to help build EV infrastructure, in order to assist the state in cutting greenhouse gas emissions. Half of those come from the transportation sector, Farley said. The bill said that the state's utilities commission, in determining the rates that utilities charge, can allow a return on investment for supplying electric vehicle equipment "deployed for the benefit of ratepayers."

Avista's proposed pilot would send EV owners through their smartphones information about the best times to charge or throttle down, he said. There wouldn't immediately be a time-of-use rate, however.

"What we're trying to do is determine to what degree we can shift on-peak [usage] to off-peak while keeping the customer happy," Farley said. As the number of EVs grows, moving power demand times will become more important, he said.

The Washington Utilities and Transportation Commission likely will decide on the proposed roughly \$3 million pilot in mid-March, Farley said.

Meanwhile, the NW Energy Coalition is urging more action on EV charging. In a paper released last week, it recommended a number of steps, including local, state and federal programs to boost transportation electrification.

"This is to include charging infrastructure in multi-family and workplace settings, and public charging for 'garage orphans' who lack off-street parking," the paper says.

The coalition also wants streamlined permitting procedures for charging station installations, and "clear legal authority for northwest utilities to participate in the transportation electrification."

Krasnowsky, communications director with the coalition, said there were multiple motivations for the analysis.

"With the movement toward vehicle electrification, we're sort of being pulled into the transportation arena," he said. At the same time, it "offers a whole range of opportunities and challenges."

"It's an opportunity for utilities in that utilities have been losing load sales to energy efficiency and to distributed generation, people putting their solar panels on," Krasnowsky said. "That's challenged the utility model to a certain extent. This could be an opportunity for utilities to replace some of that load they've lost," he said, by adding EV charging they can recoup as part of rates.

It's also especially beneficial in the Northwest because the region has large amounts of hydropower and renewables, he said, "so the charging of the cars is much cleaner."

Twitter: [@AnneCMulkern](#) | Email: amulkern@eenews.net

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