



CALIFORNIA

Calif. utilities see gold in EV buses

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SAN FRANCISCO — California utilities and regulators see electric buses as an area that's ripe for nurturing — with help from China.

Out of the entire transportation sector, which accounts for roughly 40 percent of California's greenhouse gases, buses aren't a natural candidate to pour money into. "There's 10,000 of them in the state," said David Sawaya, head of clean transportation strategy for Pacific Gas and Electric Co. "I couldn't figure out why it was so important to get them electrified."

But buses are such a tricky part of the transportation industry to electrify — with extra-large batteries and intense usage patterns — that it makes sense to tackle them first in the hopes of causing a "trickle-down" effect into other heavy-duty segments, advocates said Friday at a panel sponsored by the nonprofit China-U.S. Energy Efficiency Alliance.

"Buses in our mind are the early adopters," said John Boesel, president and CEO of CALSTART, a group that represents transportation companies, fuel providers, fleet owners and transit and air agencies in California. "They're like the passenger car market, with people jumping out and buying the Teslas and the Leafs. They are the leaders for the heavy-duty market."

The state's three major investor-owned utilities have proposals before regulators to spend a total of \$1 billion on charging infrastructure over the next five years, as part of the implementation of a 2015 law, S.B. 350, that set renewable energy and energy efficiency targets for 2030.

The California Public Utilities Commission is poised to approve a set of near-term projects, including transit bus rebates and electrification of cranes and tractors at ports, by the end of the year. They're also working on generous electricity rates for buses that avoid charging during peak usage times.

California's existing voucher program for zero-emission trucks and buses also got a jolt of cash this year. The state's budget for 2017-18 devotes \$180 million to payments at time of purchase, up from \$18 million last year. The state's cap-and-trade program is also directing \$30 million to ZEV buses in the next year. That's compared to \$55 million nationwide annually through 2020, available through the Transportation Department's Federal Transit Administration.

Gov. Jerry Brown (D), who took a climate-focused trip to China earlier this year, has put an emphasis on looking to China to bring down the cost of electric vehicles. With 500,000 buses sold per year in China, compared to 5,000 annually in North America, China has the edge in economies of scale and in its ability to impose mandates.

A representative of the largest Chinese bus manufacturer underscored the difference between China and the United States. "If the mayor of the city says he's going to buy your bus, he will buy your bus," said Andy Swanton, vice president of truck sales at BYD Motors Inc. In the United States, he said, "there's a lot more decisionmakers."

China also has generous subsidies. Local and federal governments combined can provide incentives for about half the cost of an electric bus, which runs the equivalent of \$300,000. In the U.S., 60-foot electric buses cost about \$1.4 million each, partly due to increased labor costs and partly because they last longer — 12 years, instead of six by China's standards.

The Los Angeles County Metropolitan Transportation Authority announced in July that it would buy 95 e-buses, doubling their number in California. That will cost the agency about \$800,000 per bus, above what DOT normally contributes for conventionally fueled buses.

State officials are also applauding China's announcement late last month that it would impose a mandate for zero-emission vehicles modeled after California's. Yunshi Wang, director of the University of California, Davis' China Center for Energy and Transportation, delivered a letter of congratulations earlier this month from ARB Chairwoman Mary Nichols to China's minister of industry and information technology, which will implement the rule.

Brown has also professed support for Chinese President Xi Jinping's Belt and Road initiative, which aims to build new infrastructure connecting Asia, Europe and Africa.

"If that comes true, I think maybe there will be less barriers to EVs coming this way and that way," Wang said.

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