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Viewpoints

California wins by collaborating with China on electric vehicle market

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China's market for electric vehicles took off last year; sales grew fourfold from 19,713 in 2013 to 84,900 in 2014. China may leapfrog the U.S. this year to become the world's largest plug-in electric vehicle market – largely due to a mix of new and strengthened policies.

The motivation is clean air, as well as energy security and enhancing the domestic auto industry. Their focus is incentives, including the waiver of plug-in vehicle purchase taxes nationwide, the waiver of the license plate auction fee in Shanghai (worth the equivalent of $12,300 to $15,000), and preferential treatment in Beijing's strict vehicle license lottery.

All of this is great for California. What happens in China is important to our state. For plug-in electric vehicles to succeed in California, they also need to succeed elsewhere – and China heads the list. As sales increase globally, economies of scale kick in. The price of batteries and electric powertrain components decline, not just for electric cars but also for buses and trucks, leading to greater market acceptance everywhere.

The surge in PEVs will help clean up local pollution in China – some of which drifts all the way to California – and will foster efforts to reduce carbon emissions. China's reductions in carbon emissions will be modest at first, since most electricity is generated from coal. But the nation is investing massively in natural gas, renewable electricity and nuclear energy.

California can also benefit by learning from China's electric vehicle experience. Because most people in China and Europe live in multi-dwelling buildings, China is focused on making it easy to charge cars even when owners do not have a private driveway or garage. Their experience will help us expand the PEV market to occupants of apartment and condominiums in cities like Los Angeles and San Francisco, as well as New York, Tokyo and London.

More subjectively, but perhaps most importantly, the successful rollout of PEVs will heighten awareness by the Chinese public about opportunities to reduce pollution and climate change – just as in California – which will create more grass-roots support for climate policy. It is very likely the success of PEVs, along with renewable energy, played a role in China's recent commitment to President Barack Obama to cap greenhouse gas emissions by 2030.

What can California do to accelerate the PEV market in China? A lot.

California can strengthen partnerships with national and regional Chinese governments. Some partnerships are already well underway, including with Beijing and Guangdong, where California has ongoing collaborations on environmental and carbon cap-and-trade programs. California can also exchange best practices for charging infrastructure, incentives and policies with Chinese governments and auto companies, including Tesla, the Chinese auto manufacturer BYD, and other international automakers selling PEVs in California and China.

Chinese leaders have indicated a strong interest in learning from and working with California. UC Davis and the Chinese government's Automotive Technology and Research Center have formed the China-U.S. Zero Emission Vehicle Policy Lab, in partnership with the California Air Resources Board and China's National Development and Reform Commission.

This unique effort will host information-sharing workshops and foster further cooperation on PEV-related policies. With funding mostly from private foundations and international automakers, the ZEV Policy Lab will also study Chinese and U.S. consumers to determine the factors that lead to PEV market acceptance.

California and the world have much to gain from the successful commercialization of plug-in electric – and eventually fuel-cell electric – vehicles. California's emerging partnerships with China are important steps toward clean transportation, pointing the way to a low-carbon future and more sustainable global environment.

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