

Roth: Plugging into the charging infrastructure market

By [Jim Roth](#), Director and Chair of the Firm's Clean Energy Practice Group. This column was [originally published in The Journal Record](#) on March 12, 2018.



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We know electric vehicle sales are charging ahead, but where do we charge them? Charging is no problem if you have a driveway and an outdoor electric outlet, or live in California, where there are about 12,000 charging stations (compare this to Germany, which currently has the same). But what about those who live in multifamily units or park on the

street?

Lucky for us, there are plenty of smart, motivated people working on this opportunity. I call it an opportunity because if implemented properly, the accessibility of electric vehicle charging won't amount to a challenge. Moreover, the charging infrastructure market is projected to grow to about \$20 billion in the next five years.

For clarification, because the terminology varies, a charging pile is a slower, single station using alternate current level 1 and AC level 2 charging you might find in a parking lot or other public place where a vehicle would be charged for an extended time. A charging station is more like a gas station with multiple, higher-speed, usually direct current chargers. "Charging station" is commonly used for either of those examples.

In Oklahoma, charging stations are increasingly popping up around us. The City Center East parking garage in downtown Oklahoma City just installed new stations, and solar-powered EV charging projects have recently come online by Oklahoma-based companies Delta Energy and Design in and around OKC, and Francis Solar in and around Tulsa.

Globally, new ideas continue to develop with regard to EV charging. A German telecommunications company just announced plans to more than double the country's number of charging stations by converting its distribution boxes to standard and fast-charging stations by 2020. In England and elsewhere, lampposts have been retrofitted for electric vehicle charging points. Last year China announced it would build 167,000 charging stations. This is a logical next step there since leaders plan an eventual outright ban on fossil fuel vehicles and have already made it more difficult to build them. India, the world's third-largest oil importer, has plans to sell only electric cars by 2030. It, too, has begun to invest heavily in charging infrastructure.

Once more of us are driving EVs and the infrastructure is in place, the focus will turn to how quickly cars can be charged. India's former minister of new and renewable energy has advocated for swapping of batteries at charging stations, rather than recharging, to reduce time at the pump. If that comes to fruition, I suppose we could call it a trading post?

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