Electric Vehicle Rollout Calls For Public-Private Partnerships

By **Robert Alfert**

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While many of us were vacationing this summer, Florida Gov. Ron DeSantis was busy addressing Florida's infrastructure needs. Notably, he has shown a strong inclination to embrace smart technology and innovative project delivery methods, such as autonomous vehicles and public-private partnerships, or P3s.

In mid-June, I wrote in the Orlando Business Journal about the positive implications of DeSantis signing into law H.B. 311, which progressively supports and creates legal mechanisms for the expansion of autonomous vehicle technology throughout the state, including through the use of P3s. And right before our kids all started their fall semester of school, DeSantis announced the addition of more electric vehicle charging stations down the Florida Turnpike.

While this new measure is a positive step forward, it is clear that our society needs a more comprehensive approach to transitioning from a fossil fuel-oriented mentality to EVs — with both public and private sectors working in tandem. Adding a handful of charging stations at various turnpike plazas does not get us there.

Think about it: There are tens of thousands of cars traversing the Florida Turnpike every day. It takes 45 minutes for a level 3 charging station (the type being installed along the turnpike) to adequately charge a typical EV. It takes 5 minutes to gas up a car powered by internal combustion. We all know that turnpike gas stations are crowded at peak times. How can these few charging stations handle the ever-increasing load as EVs gain traction?

Simply stated, they cannot. There are currently fewer than 5 million EVs in use in America, but the number is expected to explode to 125 million vehicles by 2030. Absent such basic infrastructure to support this burgeoning growth, the EV auto industry will not be fully embraced by many of us that have grown up with gas-powered vehicles and their simplicity (and present economy) of use.

This is where Florida's progressive infrastructure legislation, and DeSantis' clear desire to use and expand such legislation, can play a major role. H.B. 311 shows that the administration is not just thinking about the technology, but also about the infrastructure necessary to drive such technology to market and universal usage. And S.B. 7068, signed into law by the governor at the beginning of the summer, authorizes several major toll road corridors through the state, with the ability to deliver them on a P3 model. That P3 model could be utilized in a manner that allows for an ancillary network of charging stations along those new roads.

The new charging station network, as a component of the project delivery, could be funded through tolls, or by a charging fee captured by the concession entity that is delivering the roadway system. Indeed, Florida's recently amended P3 legislation would allow the state —

and, in fact, any local government entity or transportation authority — to develop a localized or even statewide EV charging station network along the Florida highway system and any major corridors.

Ideally, the state would partner with a private entity that would supply at its cost the EV charging infrastructure, and then install, operate and maintain it for a period of years. The state would provide sites for the stations, and perhaps some seed capital. The parties would negotiate a form of sharing of revenue from the charging stations, where the private entity gets its infrastructure costs repaid over time, plus overhead and profit for the installation, operations and maintenance, with the state getting a smaller percentage return over and above the former.

The length of the contract could range from 25-40 years, followed by reversion rights to the state. This is the essence of P3: The public gets its infrastructure, the private party pays for it and makes money over time. In theory, a win for all. The I-4 Ultimate project is being delivered in this exact manner.

Other states and municipalities across the country are already using this model for EV charging stations. Washington state, for example, has initiated the P3 model to build a network of charging stations at key points along five major state arterials, with a goal of continued expansion. The only problem with this program is its use of level 2 chargers — which typically take an hour to deliver enough charge for 20-50 miles of driving — instead of faster level 3 chargers.

The city of Hermosa Beach in the Los Angeles MSA, meanwhile, has opted for level 3 chargers. It will take that sort of big commitment to make EVs work. Granted, the infrastructure cost for level 3 stations is exponentially higher than for level 2 — but that is why a long-term P3 arrangement can help make this work. The private partner carries all or most of the initial infrastructure costs, banking on profitable returns over time.

The point of this piece is to both applaud the governor and to encourage policymakers to think even bigger. A transition to EVs requires not only improvements to battery technology, but also more far-reaching improvements to the infrastructure supporting EVs. I am mindful that my opinion on this is partly derived from a late summer vacation in northern California, stuck in an EV with very limited access to charging stations (and cell phone data, which was not a bad thing).

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