



## **Developing the Electric Vehicle Charging Network of Tomorrow, Today**

Giovanni Palazzo, president and chief executive officer of Electrify America

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We've been hearing a lot about the incredible disruption currently happening within the automotive industry. From autonomous vehicles to new mobility solutions, our industry is innovating rapidly. And no disruption is more exciting – and impactful – than electrification.

I am Giovanni Palazzo, the President and C.E.O. of Electrify America, the largest open DC fast charging network in the United States. I join you today from Electrify America's Center of Excellence technology lab here in Virginia, where on a normal day our engineering and software teams would be busy at work researching and testing the latest electric vehicle technologies with automakers, suppliers and developers. Our goal is to create solutions that work for any EV in the market.

Investment and progress in electrification continues to be front and center in the automotive world. And nothing could make me and my team happier. When thinking about electrifying transportation, it's easy to just talk about the amazing new EVs that automakers are bringing to market. And they truly are getting more impressive with every announcement: body shape, range, efficiency and pricing. But there's much more to the EV ecosystem than just these fantastic vehicles.

Recent significant research identifies that public charging availability and charging speed remain the most critical barriers to EV adoption. That's right, it's still all about charging. And that's where Electrify America comes in.

I'm sure many of you have thought about the challenges EVs need to overcome to gain momentum in the marketplace. And it's true, there are barriers. But today I am excited to lead a fresh and honest conversation about charging, and what it will take for our industry to become even more electric.

As part of that, I have four questions to help guide our thinking.

### ***What will it take to get America to switch to electric vehicles?***

Policy can play a huge role in driving an electric future. We all saw Governor Gavin Newsom's order to move California away from gas-powered vehicle sales by 2035. California has joined a growing list of countries and local governments who have announced regulations to transition away from gas vehicles to achieve lower CO2 emissions.

From regulations to incentives, policy can be a powerful tool in raising awareness and making EVs more attractive. But it is just one piece of a very complex puzzle, and policy alone won't get consumers ready for an EV lifestyle.

What remains essential is the availability of more public charging, and realizing that consumers want to feel as if they can find a charging station as easily as they can find a gas station.

In fact, the California Energy Commission and many others agree that at the current pace of growth, the industry will not have enough public chargers to handle an aggressive transition to electric mobility. But the good news is that we are making great progress on that barrier.

Our collective goal should be to lead a shift where consumers evolve from feelings of range anxiety, to a true understanding of range confidence. And rapidly innovating and growing charging solutions can help do just that.

But the stations are just one part of the equation. Drivers also want an efficient charging experience where they won't have to wait for hours. The need for faster, more effective charging is still limiting electric vehicle adoption, no question about it.

That's why we need to think about the electric vehicle eco-system holistically. The beauty of EVs is that unlike gas-powered cars, they give drivers real choices in how – and when – we power our vehicles. Which is why we need to concentrate on every aspect of charging. I believe there are five key elements for success.

- First – is the clear need for more public charging for passenger vehicles, like you can see in the growth of the Electrify America network today.
- Second – is the important aspect of home charging, where more than 80 percent of daily charging is done today.
- Third – we must prepare for the next frontier with charging solutions for commercial vehicles and fleets, as we start to see the trucking and delivery sector go electric.
- Fourth – very important is energy and grid services, and how we work with utilities to develop and deploy new technologies like battery storage and charging with renewables.
- And finally – education and awareness. We need to increase all our efforts to educate consumers on charging EVs. They need to know it's as easy as refilling at a gas station or charging your cell phone.

We can't just concentrate on one area to succeed. We have a lot of work to do, but as a company – and an industry – we're making incredible progress. Today, EV sales are still only about two percent of new car sales. To achieve more rapid growth, we need the involvement and support of all the different players in this space.

That brings me to my second question.

### ***How does the entire charging ecosystem contribute to accelerating EV adoption?***

The charging value chain is complex, and requires many different stakeholders to succeed.

- We develop EV charging hardware and electronics with manufacturers.
- We create our own software with suppliers to develop our apps and ensure easy communication with vehicles.
- Utility companies play a vital role in supporting our operational power needs.
- We work to find real estate partners, like retailers, banks and grocery stores, to house and help promote the stations.
- Then there is coordination with state and local governments, all of which offer different regulations, initiatives and incentives.
- And, of course, the automakers and their customers, who we need to work hand-in-hand with.

No one single company can transform the U.S. to electric mobility on its own. To succeed as a united industry, it is going to take all these parties continuing to innovate – and continuing to grow. And out of that growth, as usual, even more opportunities will arise.

All these topics are at the core of Electrify America's mission, triggering my third question.

***How can Electrify America help lead this revolution to drive EV adoption?***

We are the largest open DC fast charging network in the U.S. We recently celebrated the opening of our 500th station nationally – in just two and a half years. We plan to have about 800 stations with around 3,500 DC fast chargers by the end of 2021. Our chargers are 150 kilowatts and 350 kilowatts – the fastest in the U.S.

We're laser-focused on creating solutions that not only meet today's needs, but also lay the groundwork for the future. We're doing that by concentrating on all three of the charging areas that will drive EV adoption in the near-term.

- That includes expanding our public charging network through Electrify America.
- We are also proud to have launched Electrify Home, which helps empower EV drivers through home charging solutions.
- And most recently, we introduced Electrify Commercial, to prepare for the electrification of commercial fleets.

These three key areas of our company will work together to boldly increase EV adoption in this country. To do it right, we looked at all the pain points within the charging eco-system and then developed the following brand pillars.

- Availability
- Accessibility
- Convenience
- Speed
- Reliability

The future is already inspiring us. This is why we invest in advanced technologies like Plug&Charge, which makes charging and payments as simple as plugging in your EV.

We will launch Plug&Charge technology on our chargers very soon – ready for use in the coming months with Plug & Charge-capable EVs like the Ford Mustang Mach-E, Porsche Taycan and Lucid Air.

It's exciting to have one eye on today and one eye towards tomorrow. And we will continue to innovate as we do our part in driving EV adoption.

I have one final question for you all.

***Is the creation of an EV charging network someone else's problem?***

I am here to tell you absolutely not. Every stakeholder needs to recognize their part to make this entire ecosystem succeed. From automakers to utilities to regulators, we all play a key role in bringing electric mobility to life.

I have been working in the EV business for over 15 years, and believe me, I cannot wait to see how the industry continues to grow and evolve over the following months and years. The future is exciting, bright and electric. And the future has already started.

