

ASK THE EXPERT

ABB's Matthew Young on EV Business Opportunities for Electrical Contractors



By Tim Kridel

The EV revolution is here, and electrical contractors are well-positioned to benefit from this megatrend. The U.S. will require more than \$100 billion in grid-to-charger hardware installed by 2030 — including grid upgrades, on-site electrical distribution equipment, and EV chargers themselves.

Installations are currently booming across the U.S., so we sat down with Matthew Young, EV Grid-to-Charger Leader at ABB, to learn more.

1.

Where are EV chargers currently being installed?

We see electrical contractors installing chargers almost everywhere. For most passenger EVs, owners have a level 2 charger installed where they park their car. This is usually a garage, but apartment complexes and condos are adding chargers quickly, as well. Certain states have laws requiring chargers to be installed in new multi-family construction, and existing properties want to retain occupants and retrofit their parking areas to stay competitive.

If an EV owner doesn't have a charger where they park, they often use level 3 fast chargers at nearby fuel stations that have electrified, retail store parking lots with chargers, or dedicated charge-point operators. This is common in large urban areas where charger operators use an "infill" strategy to build charging density. In some areas, coffee shops are even getting in on the action.

There is also a tremendous amount of charging being installed for commercial fleets, transit buses, medium- and heavy-duty trucks, and much more. Most of these vehicles will use level 3 fast chargers, which have large power and planning requirements.

2.

One major reason why people don't buy EVs is range anxiety. How is that concern being alleviated?

To start, \$5 billion of federal funding from the Bipartisan Infrastructure Law is going toward building out interstate charging networks through the National Electric Vehicle Infrastructure (NEVI) Formula Program. This additional highway charging is key for supplementing at-home charging for longer road trips, even though nearly 90% of charging occurs where vehicles are parked overnight. Thanks to charge-point operators, chargers are already starting to pop up at gas stations, truck stops, and new locations near highways with a variety of amenities, such as dining, shopping, or even mini golf.

One reason we're seeing an explosion in the public charging space is that federal funding is already catalyzing private investment. We're seeing record growth in the EV charging space even though very few federal dollars have actually hit the street yet. All told, the direct federal funding will be dwarfed by private investment, probably by 10 times.

For electrical contractors, this trend can be more profitable than the residential market. When you're installing banks of chargers — say, 10 to 20 chargers at a single location — you have lower overhead costs versus traveling all over a city doing one-off installations in individual homes.

3.

What are the opportunities in the fleet market?

Electrifying fleets will be one of the largest opportunities for contractors. Fleet owners typically know the exact routes and dwell times of each vehicle, making them prime targets for electrifying and predicting charging needs. A general rule when electrifying is that the more liquid fuel used, the faster the return on investment — something fleet owners embrace when making the switch. These can be last-mile delivery fleets, service fleets (think HVAC, roofers, plumbers, etc.), and even rental car companies. All of these will need banks of chargers and new electrical equipment installed.

There are also plenty of emerging fleet opportunities that aren't obvious. One example is airports, which are starting to electrify their full operations, such as catering trucks, shuttle buses, de-icing vehicles, and fuel trucks. [Kansas City International Airport](#) has 14 electric buses that are charged wirelessly when they stop to pick up passengers. There also may be new business models for airports, like "valet charge and park" in their garages so one EV isn't tying up a charger for an entire week.

The takeaway is that when developing an EV charging business strategy, contractors should explore each vertical to learn the types of vehicles that owners are already planning to electrify.

4.

How is the grid going to handle the additional load on the system?

Utilities will also receive federal funding for grid upgrades, but it's important to remember that we've been here before. We overcame the need for increased grid capacity when we invented electric clothes dryers and put air conditioning in a majority of American homes. We solved it again 20 years ago when data centers started to come online. Crypto caught us by surprise, but we found a way to create the power we needed.

EV charging is not a surprise. We've known about it for a long time, and electric utilities have smart planning teams addressing this issue right now. Plus, we're on a ramp up. It won't happen overnight, and that's okay. Adoption will be different across the country — Colorado will move at a different speed than Montana. California will be different than New Hampshire. There will be a steady increase of electrical installations for the next 20 years and billions of new investments in the electrical space.

5.

What else should contractors think about?

Many utilities will need to bring in electrical contractors because their crews can't handle all the additional EV-related projects on top of everything else. Many of those opportunities will involve grid upgrades, such as transitioning to digital substations or adding transformers.

One piece of advice for electrical contractors is that whoever ramps up fastest wins. Even if your market is moving slowly toward adoption or the equipment has a longer lead time, whoever is ready when the supply chain eventually sorts itself out is going to be best positioned to win. ABB also has a few resources available now, including this [summary of the growing EV Grid-to-Charger segment](#) and the ability to [Ask an Expert](#) feature.
