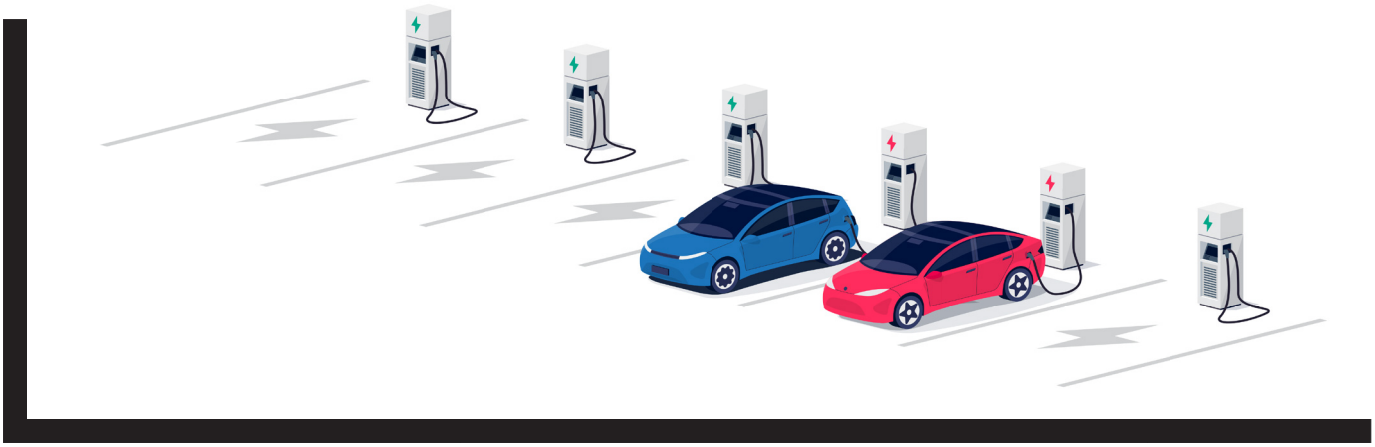
IS YOUR EV CHARGING ENTERPRISE READY TO SCALE UP?



With nearly 20 million EVs expected to be in use by 2030, Level 3 EV charging operators will need to make sure they have a strategy in place to capitalize on the coming demand.

If you're planning on purchasing EV chargers for your charging station today, what assurances do you have that they can be configured – and properly maintained – to keep up with customer needs as business grows?

This is where carefully reviewing your options for EV charging equipment, service agreements and warranties can make all the difference.

Here are some key questions to ask when assessing your charging station's future capabilities:

1. Is Your Charging Station Site Prepped for Adding More Supply Power Later?

Even though you may not need all that power initially, it's a good idea to make sure you can tap into the maximum amount of power should you need it, according to Michael Peash, Sales Manager, EV Charging Solutions for Lincoln Electric.

"When I've worked with people who are installing charging stations, I always tell them to wire it to the max," Peash said. *"You should be putting the maximum amount of wire in there so that you're future-proofing that charging station."*

Steven Sumner, Vice President of Global Equipment for Lincoln Electric agrees.

"Because it can typically cost twice as much to add more wire later, it's best to plan ahead for the largest possible use case," Sumner said. "That also means making sure the main electrical panels are configured with room for expansion."

If you're putting one charging station in today and you're forecasting demand to grow in your area, make sure that the power mains are set for two, three or four stations, he said.

2. What Options are Available to Add More Power (or Accessibility) to a Charging Pedestal?

If your charging station is wired for lower capacity 100-kilowatt amp chargers, you have two options for adding power. You can either add power modules to your site or add another charger that can accept power at a higher capacity.

Peash also says having flexibility to add more power to a charger is key, especially considering the variety of makes and models of EVs and their individual power requirements.

"Each car is a snowflake in the sense they take different types of charging power. Some take a lot of power and some take very little power," Peash said. *"So having the ability to add power down the road is extremely important."*

Until recently, there was only one option when purchasing a charger with less capacity than you needed – rip out the charger and buy a new one. But now, you can add separate power units, (power modules or towers) to increase charging capacity.

If you start out with a charger with a single cable, it's worth asking if the charger can be upgraded to a dual cable package. Sumner also recommends looking for chargers that offer options to add North American Charging Standard (NACS) or Combined Charging System (CCS) plugs.

"That way you aren't only locked into serving Tesla customers or CCS1 customers – you can reach both without having to force them to carry their own adaptors," Sumner said.

3. Does the Charger Have Network Software Features to Manage Load Balancing?

If you're anticipating more EV drivers to frequent your station, you'll want chargers that can help you distribute electrical power efficiently across all charging points within your charging station.

To accomplish this, you should look for chargers that offer the best combination of hardware and software so that you can divide power efficiently between customers and avoid "charging rage."

"You don't ever want to turn somebody away, so being able to load balance reliably when more drivers show up to your station will help build customer loyalty," Sumner said. *"They'll be able to say 'I may not always get the maximum amount of power, but it always works'."*

Load balancing helps avoid situations where one charging point may draw too much power, potentially causing overloads and impacting the performance of other connected EVs. To avoid this, you will want to look for EV chargers with load balancing software that includes energy management features. These will optimize distribution and provide usage data that can help you decide how to react to swings in demand.

5. Can the Charger Be Easily Updated with Firmware/Software?

Not all EV chargers have the same capabilities when it comes to making updates. To stay up to date, you should look for a charger that can make over-the-air software or firmware updates. This will allow you to keep your charger evergreen no matter what type of EV rolls into your charging station.

6. What is Included in the Service Level Agreement?

With any new business, there's bound to be some growing pains. As more customers utilize your charging services, the more likely your equipment will need some care and attention to combat wear and tear and other issues that may impact service.

Anytime a charger is offline is a lost opportunity for the charger owner to increase their return on investment. Plus, if you fall below the greater than 97% average annual uptime requirement under the National Electric Vehicle Infrastructure Formula Program, you may face consequences. While there is still debate about how best to enforce the mandate, it is a distinct possibility that charging stations could face fines and other penalties for noncompliance, such as denial of federal funding.

For these reasons, it's imperative that you have a firm grasp of what is included in your service plan – and scrutinize the details.

IS YOUR EV CHARGING ENTERPRISE READY TO SCALE UP?

Some of those details may or may not include 24-hour or next-day technical support access, on-site response times within 5 business days or less, annual preventive maintenance visits, replacement parts and associated travel costs to your site.

You should also verify whether the technicians that will be sent to repair your charging station are factory certified to repair the affected charger and ask what type of car they will be driving to service your charging station.

"If they aren't going to show up in an EV, I'd be concerned," Sumner said. *"That's pretty basic. The only way to test that a repair is made correctly is to plug it into an electric car. Otherwise, they would have to wait until a customer shows up to determine if the repair fixed the problem."*

7. How Long is the Warranty and What Does it Cover?

When it comes down to it, one of the biggest differences in price when comparing EV chargers is the warranty itself. Some of the less expensive chargers may include shorter warranties or only cover the cost of parts for repairs – not any associated labor or travel costs.

"It's really all over the map depending on the provider," said Peash. *"Ideally, you want to be looking for the longest warranty possible and one that covers the most amount of the costs."*

Essentially you have to ask: "Do you want to pay less up front and potentially pay more down the road to repair and maintain the charger? Or do you want to pay more at the point of purchase and get the peace of mind that your charger will be well taken care of?"

Most charger manufacturers offer a standard warranty that includes parts and labor for 2-3 years. But considering 7-10 years is the average time it takes to achieve a return on investment, it may be worth considering purchasing an extended warranty to make sure you get the most out of your equipment. That way, you can ensure your charger continues to keep up as your customer base expands.

"Just make sure to check all the fees against the cost of long-term maintenance support," Peash said. *"There's a lot of hidden things that can add up if you're not careful."*