

**DOCKETED**

|                         |  |
|-------------------------|--|
| <b>Docket Number:</b>   | 22-EVI-03  |
| <b>Project Title:</b>   | National Electric Vehicle Infrastructure Deployment Plan Development, 2022-26 for CEC and Caltrans |
| <b>TN #:</b>            | 243814   |
| <b>Document Title:</b>  | NEVI Deployment Plan Development - EdgeEnergy Comments   |
| <b>Description:</b>     | N/A  |
| <b>Filer:</b>           | Lindsay Pletch   |
| <b>Organization:</b>    | EdgeEnergy, LLC  |
| <b>Submitter Role:</b>  | Public   |
| <b>Submission Date:</b> | 6/30/2022 2:21:12 PM   |
| <b>Docketed Date:</b>   | 6/30/2022  |



06/29/22

**California Energy Commission and California Department of Transportation  
Docket Unit, MS-4  
Re: Docket No. 22-EVI-03  
715 P Street Sacramento, CA 95814**

**RE: California's Draft Deployment Plan for the National Electric Vehicle Infrastructure Program Dear CEC and Caltrans Staff,**

Dear CEC and CDT,

Edge Energy, a Cincinnati-based company which has created a product that can convert single-phase power to three-phase power, can assist the state of California in the deployment of DC Fast Charging in rural areas. We appreciate the opportunity to share our thoughts regarding the deployment of NEVI and applaud your state on how proactive you have been with the EV movement.

Below is some pertinent information about EdgeEnergy and how we can help you to bring DC fast charging to rural disadvantaged communities:

#### **EdgeEnergy**

- EdgeEnergy manufactures a power source that allows for the installation of EV Fast Chargers in areas without sufficient power infrastructure.
- EdgeEnergy's patented product creates an opportunity to expand EV Charging infrastructure into rural and remote regions of America that do not have access to three-phase power, which is necessary for the deployment of fast chargers.
- Founded in 2020 and headquartered in Cincinnati, Ohio, EdgeEnergy manufactures its product in its Cincinnati manufacturing plant and is compliant with Buy America. 94% of the EdgeEV100 components are made in the United States.

#### **Electric Vehicle Corridors**

- When President Biden signed the Infrastructure Investment and Jobs Act (IIJA) into law, he committed \$7.5 billion to build out a nationwide network of 500,000 EV chargers.
- To ensure that the transition to EVs is successful, the Biden Administration is prioritizing having DCFC (fast chargers) along the highway corridors to avoid "range anxiety."
- The lack of three-phase power in America presents a major obstacle for fast chargers located on the Alternative Fuel Corridors (AFC), which is required by the IIJA.
- Currently only 56% of the United States electrical grid supports three-phase power, which is required to support DC-fast charging.
- Infrastructure dollars have funded 50,000 new fast chargers. However, only 15,000-20,000 of those will have access to three-phase power. America's power grid is not prepared for the deployment of fast-charging infrastructure, which is why EdgeEnergy has seen increased demand for its technology.

## **The Only Three-Phase Power Solution for DC Fast Chargers**

- When coupled to a DC Fast Charging station, the EdgeEV100 allows for the expansion of fast-charging networks into areas without three-phase power at a lower cost.
- EdgeEnergy's product can be used with any charging station which will utilize EdgeEnergy's revolutionary, patented technology to generate solid and reliable three-phase, 480-volt output for the DC Fast Charger from existing single-phase infrastructure.
- The EdgeEV100 is designed for easy installation with any DC Fast Charger. The EdgeEV100 is a fully enclosed system, secured in a metal weather-tight enclosure, and is easily installed with minimal site-work.

## **Cost Savings**

- Currently, five miles of direct three-phase power with line extension will take 24-36 months to complete, while EdgeEnergy can deliver an EdgeEV100 in under six weeks.
- EdgeEnergy has learned that one state is planning on budgeting \$1 million per mile for a three-phase line extension. EdgeEnergy's product only costs \$100,000-\$300,000 and does not require permitting and a lengthy installation process.
- EdgeEnergy provides innovative solutions for edge-of-grid locations for utilities to support EV drivers and optimize their existing grid infrastructure and operations.
- EdgeEV100 allows utilities to tap into the single-phase power grid and return three-phase power to its customers.

## **Our thoughts on California and EV Charging**

- California is the strongest electric vehicle state with over 79,000 chargers statewide, ranging from Level 1 to DC fast chargers, and almost 1 million electric vehicles throughout the state. However, most of the state's population is concentrated in 9% of the state's landmass, which is where the majority of the state's EV infrastructure is located. 55% of the state is rural and needs access to three-phase power to deploy DC fast charging. This is where EdgeEnergy can help the state to implement DC fast chargers in short order, without requiring the state to run additional three-phase power lines.
- California has 88 rest areas, 28 of which are listed in rural areas that do not have access to three-phase power. These rest areas are prime real estate for DC fast chargers but will need access to three-phase power in order to be effective. These are prime locations for EdgeEnergy to assist.
- Additionally, California has 109 highway truck stops, 50% of which will require three-phase power to deploy DC fast charging. As California seeks to move freight and goods without emissions, it will be vital for these stops to have access to DC fast charging.
- To run DC fast chargers, three-phase power is required that will carry at least 208 volts. The major highways running to and from Las Vegas and Phoenix through California do not have access to such power and will require it to deploy fast chargers.

In short, for the state of California to deploy its NEVI funding statewide and to be able to cover all its corridors, three-phase power will be required. To ensure that rural areas, which are typically disadvantaged, are served with DC fast chargers, three-phase power will be required. For the state to meet its goals of 100% sales of new passenger cars to be zero emission by 2035, rural areas must have three-phase power to avoid range anxiety and hesitancy regarding electric vehicles.

EdgeEnergy can bring an immediate fix to this need by deploying our product, which plugs right into a single-phase power source and converts it to a three-phase source. A meter can be placed by the utilities on our devices, allowing utilities to sell three-phase power to customers without the time and investment it takes to permit and run new lines.

Please see the Appendix for information regarding our EdgeEV100 product and how it works.

Thank you so much for the opportunity to submit these comments. Please feel free to follow up with us at any time.

Sincerely,

Ben Morris  
Vice President of Sales and Marketing  
Mobile: 859-814-4289  
ben@edgeenergyev.com

APPENDIX  
EdgeEV100 Brochure



EdgeEV100™

Single-Phase Power Source for Three-Phase  
DC Fast Chargers



The EdgeEV100™ is designed to meet the needs of a rapidly expanding charging network in rural locations.

EdgeEnergy™ EdgeEV100™

### Fast, Low Cost DCFC Deployment

The EdgeEV100™ allows you to deploy DC Fast Charger quickly and a lower cost than traditional 3-phase line extensions or alternative edge of grid solutions.

### Three-Phase from Single-Phase

The EdgeEV100™ uses patented technology to provide isolated and balanced 3-phase power in ratings up to 100 kW. When coupled to DC Fast Charging stations the EdgeEV100™ allows for expansion of fast charging networks into areas without 3-phase power at lower cost.

### A Simple Plug'n'Play Solution

The EdgeEV100™ is designed for easy installation with any DC Fast Charger. The EdgeEV100™ is a fully enclosed system. Secured in a metal weather-tight NEMA 3R enclosure and is easily installed with minimal site-work in just a few hours.

### Universal Compatibility

The EdgeEV100™ works with any DC Fast Charging stations up to 100 kW. Need more capacity? No Problem. The EdgeEV100™ can be paired to provide additional kW output.



### Remote Monitoring

Built-in monitoring and alert systems makes remote management of the EdgeEV100™ easy. EdgeEnergy™ allows owners to customize their management dashboard to meet their specific requirements, including custom alerts and remote restart and security features.

### High Availability and Servicability

The EdgeEV100™ is extremely reliable and requires essentially no maintenance. Components can be installed in the field without any specialized tools or expertise.

### Made in America

The EdgeEV100™ and all EdgeEnergy™ products are proudly built in America. Our domestic supply chain and production reduces lead time and keeps your installation on track.



**Contact Us:**  
[www.EdgeEnergyEV.com](http://www.EdgeEnergyEV.com)  
[sales@edgeenergyev.com](mailto:sales@edgeenergyev.com)

Edge Energy, Inc. reserves the right to alter product offerings and specifications at any time without notice, and is not responsible for typographical or graphical errors that may appear in this document.  
Copyright © 2022 Edge Energy, Inc. All rights reserved. EdgeEnergy and EdgeEV100 is a U.S. registered trademark/service mark of Edge Energy, Inc.. REV-JUN22