

**DOCKETED**

<b>Docket Number:</b>	19-AB-2127
<b>Project Title:</b>	Implementation of AB 2127 Electric Vehicle Charging Infrastructure Assessments
<b>TN #:</b>	252331
<b>Document Title:</b>	BorgWarner Comments on AB 2127 EV Charging Infrastructure Assessment
<b>Description:</b>	N/A
<b>Filer:</b>	System
<b>Organization:</b>	BorgWarner
<b>Submitter Role:</b>	Public
<b>Submission Date:</b>	9/20/2023 3:23:40 PM
<b>Docketed Date:</b>	9/20/2023

*Comment Received From: Bill Kregel*  
*Submitted On: 9/20/2023*  
*Docket Number: 19-AB-2127*

**BorgWarner Comments on AB 2127 EV Charging Infrastructure Assessment**

See attached letter.

*Additional submitted attachment is included below.*



September 20, 2023

California Energy Commission  
715 P Street  
Sacramento, CA 95814-5512

RE: AB 2127 Electric Vehicle Charging Infrastructure Assessment

Dear California Energy Commissioners and Staff,

BorgWarner appreciates the opportunity to provide input and comments on the California Energy Commission's Second Assembly Bill (AB) 2127 Electric Vehicle Charging Infrastructure Assessment: Assessing Charging Needs to Support Zero-Emission Vehicles in 2030 and 2035. We commend the Energy Commission's progress accelerating the deployment of charging infrastructure and carrying out the state's long-term electrification goals.

BorgWarner is a 130-year-old U.S. company headquartered in Auburn Hills, Michigan, and employs over 6,000 people in 20 facilities in nine U.S. states, including R&D centers in Auburn Hills, Michigan as well as California, Indiana, North Carolina, and New York. BorgWarner locations around the world purchase direct materials in an annual amount of over \$1.7 billion from over 900 U.S.-based suppliers. Our products help improve vehicle performance, propulsion efficiency, stability, and air quality. We manufacture and sell products worldwide, primarily to original equipment manufacturers of passenger cars, SUVs, vans, and light trucks, as well as commercial vehicles, off-highway vehicles, and the aftermarket. We are an original equipment supplier to nearly every major automotive original equipment manufacturer (OEM) in the world and operate manufacturing facilities, serving customers in Europe, the Americas, and Asia. BorgWarner's Direct Current Fast Chargers (DCFCs) are developed at our technical center in San Diego, California and manufactured in Dearborn, Michigan.

BorgWarner appreciates the Energy Commission's development of the second AB 2127 EV Charging Infrastructure Assessment. As the State finalizes this assessment and seeks to further accelerate the deployment of charging infrastructure for light, medium, and heavy-duty vehicles, we have the following recommendations.

CEC's Programs should increase focus on deployment of DCFCs. We recommend the CEC prioritize DCFC deployment because DCFCs can meet fleet operators' long-term charging needs. Commercial EVs need fast charging times in order to encourage fleet owners to transition to e-mobility. While overnight charging at lower power may be appropriate for certain applications and fleets on a regimented schedule, industrial HD and port vehicles often have duty cycles that require faster, higher power charging due to their on-demand jobs. DCFCs provide needed rapid charging time and offer operator confidence. For example, many delivery trucks need fast charging times because logistics operations are focused on speed and time to deliver goods and fast charging. Furthermore, fast charging allows the vehicle operator to truly replace one diesel truck with battery electric vehicle (BEV) truck, rather than two BEV trucks in

order to allow time for charging during a duty cycle.

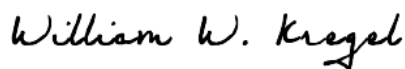
EV fleet adopters need to diversify their charging assets with DCFCs to have more flexibility as their fleets grow and unforeseen needs arise. For example, unexpected equipment or user error during an overnight charge could render a mass transit vehicle unavailable to perform. DCFCs are indispensable in these situations because the mass transit vehicle can be rapidly charged by the DCFC and quickly placed back into service.

Additionally, DCFCs help futureproof infrastructure investments by allowing fleet operators to immediately convert and deploy BEVs while also allowing them to remain up to date with advancements in battery technology. Vehicle batteries are quickly improving in size, chemistry, energy density, and efficiency resulting in increased vehicle range. This range improvement will, however, require faster charging capabilities. While heavy-duty BEV and port vehicles typically require large batteries with increasing power density, DCFCs enable quicker and more efficient charging of these vehicles. Additionally, site and infrastructure owners maximize their investment because DCFCs enable site-readiness for future DCFC expansions. In light of the significant public investment that must be made to build EV infrastructure, publicly-funded programs and incentives for medium- and heavy-duty vehicles should focus on prioritizing DCFCs to help fleet operators minimize sunk costs and maximize their investments by futureproofing the initial installation. EV infrastructure will likely be built in phases as fleet operators convert their fleets over time. Incentivizing initial investment in DCFC enables a site to add DCFC capabilities efficiently by avoiding additional cost to redesign or rebuild a site in the future.

There is also a need for investment and prioritization of Vehicle-to-Grid ("V2G") technologies. As identified in the assessment, DCFCs allow for bidirectional charging. A bidirectional charger can receive energy (charge) and also put energy back (discharge) into the grid. Bidirectional-capable charging futureproofs infrastructure investment by providing support for increased electricity demand. V2G technology can significantly enhance the value proposition of EV fleets, such as electric school buses. Additionally, V2G technology can help address energy use and manage peak demand times and costs, as well as serve as backup power during an outage, public safety power shutoffs (PSPS), or during natural disasters. As EV adoption increases, this technology becomes more critical to enable sustainable grid management, grid resilience, utilization, and national security protection.

BorgWarner appreciates the opportunity to provide input on the AB 2127 Electric Vehicle Charging Infrastructure Assessment. We look forward to continuing to work with the Commission and other stakeholders to drive commercialization of charging technologies and infrastructure.

Sincerely,



William W. Kregel  
Vice President, Government Affairs  
BorgWarner Inc.