

**DOCKETED**

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*Comment Received From: Electrify America*  
*Submitted On: 12/14/2019*  
*Docket Number: 17-EVI-01*

**Comment regarding Staff Workshop on Future Equipment Requirements for CALeVIP**

*Additional submitted attachment is included below.*



December 13, 2019

Mr. Brian Fauble  
California Energy Commission Specialist II  
1516 Ninth Street, MS-6  
Sacramento, CA 95814

**RE: Docket Number: 17-EVI-01; Staff Workshop on Future Equipment Requirements for CALeVIP**

Mr. Fauble:

Electrify America LLC, the largest, open DC Fast charging network in the U.S., is investing \$2 billion over 10 years in Zero Emission Vehicle (ZEV) infrastructure, education and access. The investment will enable millions of Americans to discover the benefits of electric driving and support the build-out of a nationwide network of workplace, community and highway chargers that are convenient and reliable. Electrify America expects to install or have under development approximately 800 public ultra-fast charging stations with about 3,500 chargers by December 2021. During this period, the company will be expanding to 29 metros and 45 states, including two cross-country routes, delivering on its commitment to support increased ZEV adoption with a network that is comprehensive, technologically advanced and customer friendly. Electrify America's stations are open to customers with all brands of vehicles, and they accept multiple forms of payment, including credit and debit cards.

During development of its network, Electrify America has observed three significant trends relevant to the California Energy Commission's workshop on the future equipment requirements for CALeVIP regarding the use of both CCS and CHAdeMO in the U.S. market.

**Trend 1: An Increasing Percentage of non-Tesla U.S. Battery Electric Vehicle (BEV) Sales Use the CCS Standard**

According to independently produced data from IHS, the percentage of non-Tesla EV sales that use the CCS standard has grown steadily in the U.S. market since 2011. Vehicles using the CCS standard have outsold vehicles using the CHAdeMO charging



protocol every year since 2016. Annual U.S. sales of CCS-capable vehicles quadrupled between 2014 and 2018, while sales of CHAdeMO-capable vehicles reduced 50 percent during the same period. Through August of 2019, vehicles using the CCS standard represented 75 percent of non-Tesla 2019 sales nationwide.

## **Trend 2: CCS is increasingly the Non-proprietary Standard of Choice for OEMs in the U.S. Market**

Electrify America has observed that three types of plugs are used in the U.S. DCFC market. First, Tesla's vehicles currently charge using Tesla's proprietary plug.<sup>1</sup> Second, two EV models currently sold by the Nissan Alliance in the U.S. charge using the CHAdeMO standard plug. Third, new electric vehicles from all other automakers – including Ford, GM, Fiat-Chrysler, Mercedes-Benz, Volvo, Kia, Hyundai, Harley-Davidson, Energica, Honda, BMW, Jaguar, Volkswagen, Audi, Porsche, Lucid, Byton, Fisker, Rivian, and Proterra – use or will use the Combo/CCS plug, which relies on the non-proprietary charging standard developed through a process of the Society of Automotive Engineers.

In the U.S. market, some major OEMs (e.g. Hyundai) have committed to using the CCS standard for new models after using a different protocol in the past, demonstrating that the CCS standard is emerging as the non-proprietary standard of choice for OEMs. In July, New York's Public Service Commission observed this trend and found that only the CCS standard currently meets its definition of "standardized" charging.<sup>2</sup>

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<sup>1</sup> Tesla sells a CHAdeMO adapter for \$450 in the U.S., although it is currently "out of stock" on Tesla's website. Tesla offers a CCS adaptor in Europe for approximately \$190, and new Tesla models in Europe use the CCS standard.

<sup>2</sup> State of New York Public Service Commission, Case 18-E-0138: Proceeding on Motion of the Commission Regarding Electric Vehicle Supply Equipment and Infrastructure; Order Modifying Incentive Program and Granting, in Part, Petition for Rehearing. Issued and Effective July 12, 2019.

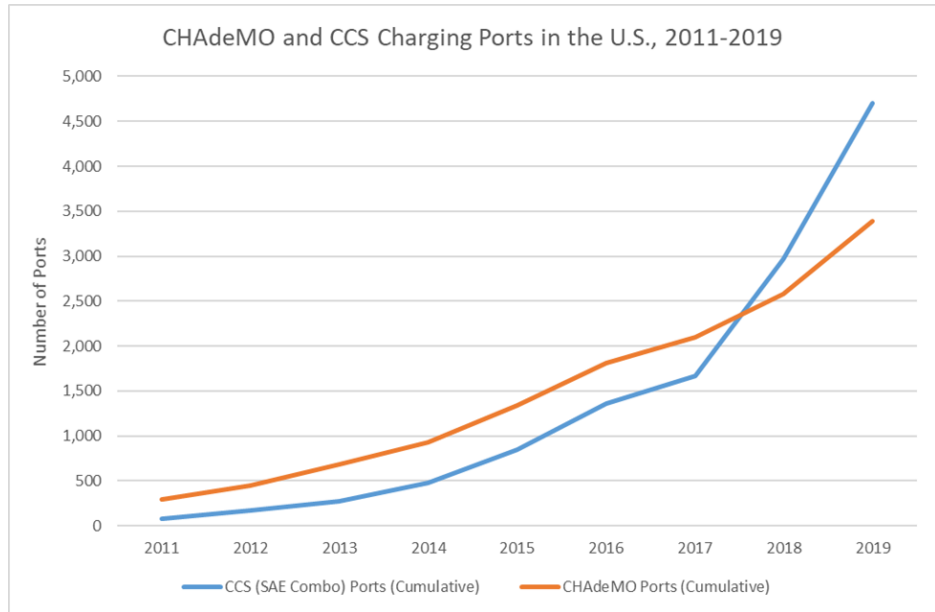
<http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7bD51479D5-A155-48B5-8B08-A3959E5F5AD1%7d>



**Trend 3: CCS  
Charger  
Deployments are  
Outpacing  
CHAdEMO  
Deployments**

As a result of the increasing demand for CCS charging prompted by the first two trends, charging companies such as Electrify America have been choosing to deploy CCS

capable chargers rapidly over the past three years. For example, Electrify America’s standard station designs all include both CCS and CHAdEMO capable chargers, but Electrify America typically deploys more CCS chargers per station site due to demand. As a result, there are now substantially more CCS chargers in the U.S. market than CHAdEMO chargers.



Electrify America appreciates the opportunity to comment. We hope this information is of assistance as the California Energy Commission considers future equipment requirements for the CALeVIP program. We would be happy to discuss these identified trends at your convenience if it would be of assistance.

Sincerely,

/S/

Matthew B. Nelson  
Director of Government Affairs