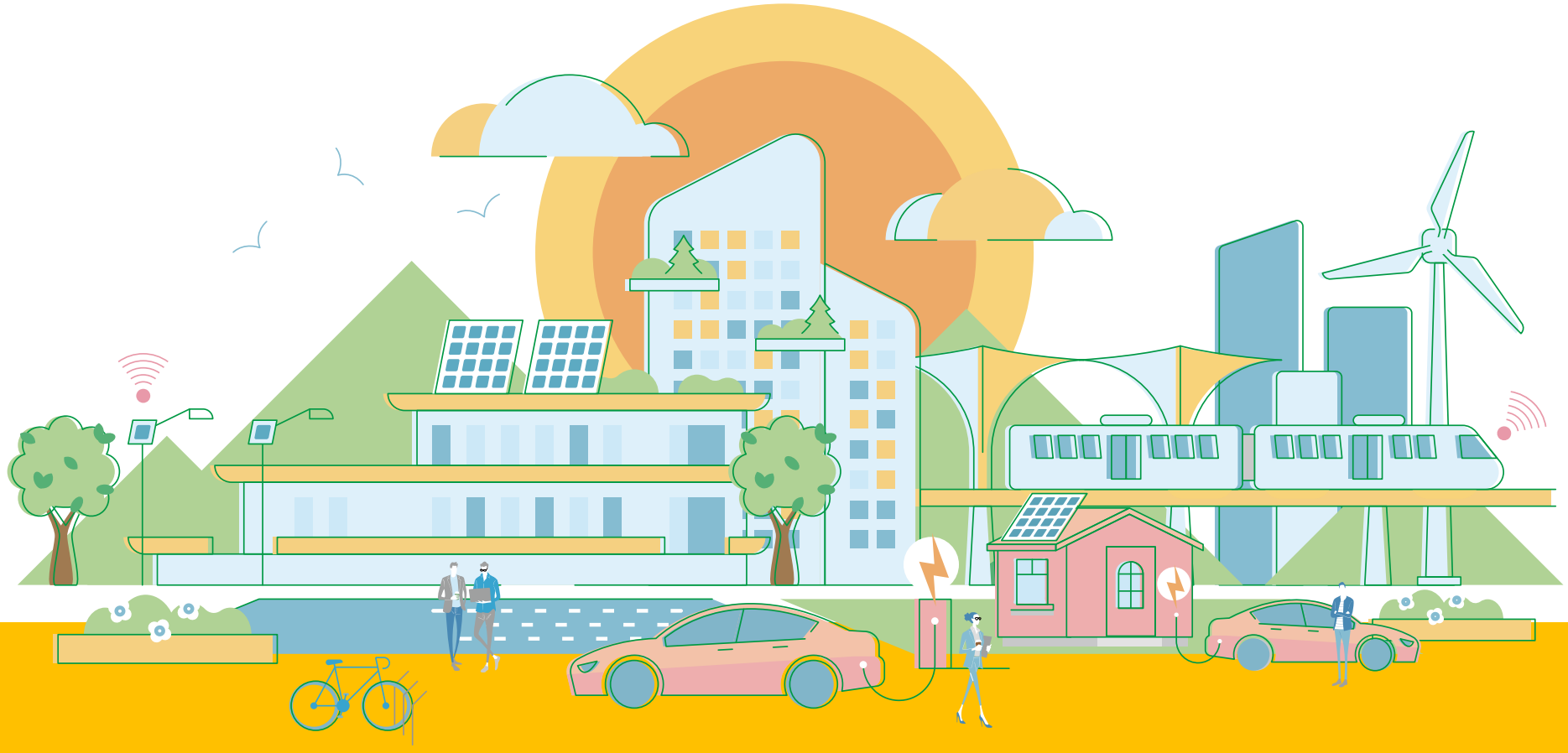
North American Status Update

June 2024

David N. Patterson, P.E.

CHAdeMO Association NA



Overview

1. U.S. EV Sales

2. U.S. Public Charging and CHAdeMO Status

3. U.S. V2X

4. North America Charging Standard (NACS)

5. Megawatt Charging System (MCS)

6. 2024 Plan for CHAdeMO Promotion in U.S.

U.S. EV Sales Trends

OEM	Market Share of U.S. EV Segment (%)
Tesla	55.1
Ford	6.1
Chevrolet	5.3

- A U.S. sales record of 1,189,051 new electric vehicles (EVs) sold in 2023.
- EV share of the total U.S. vehicle market was 7.6% (up from 5.9% in 2022) – Should reach 10% in 2024.
- Sales slowdown – Q4 sales increased year over year by 40% but compared to 49% gain in Q3.
- U.S. EVs average price more than $50,000.
- The Tesla Model Y accounted for 33% of all EVs sold
- To protect against China's unfair trade practices, U.S. Tariff Increases for Chinese EVs from 25% to 100%

(Data from Kelley Blue Book Estimates)

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CHAdeMO - Public DC Fast Charging in U.S.

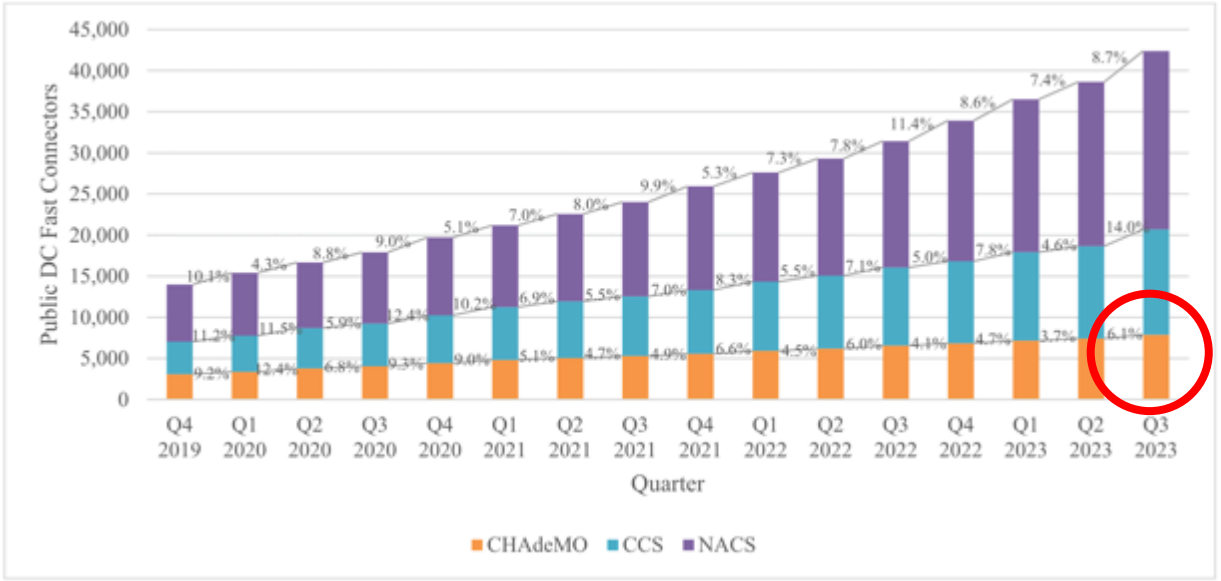
- The U.S. number of CHAdeMO connectors continued to grow (6.1%) in Q3.

- According to large CPOs (EVgo, ChargePoint, etc.), the continued growth of CHAdeMO chargers is due their use by Nissan LEAF and Mitsubishi Outlander (currently for sale) and older EV models on the road with the CHAdeMO connectors.

- Due to increased numbers of Tesla and CCS installations, CHAdeMO share decreases statistically. In Q4 2019, CHAdeMO connectors made up 22.1%, compared with 18.6% in Q3 2023.

Connector	All DCFC Capable EV (%)	Growth in DCFC Stations (%)
CCS-1	30	14
CHAdeMO	5	6.1
Tesla	65	8.7

Summary - Q3 2023 Public DCFC Growth



Historical Trend - Public DCFC Growth (Experian Information Solutions 2023b)

(Data from Electric Vehicle Charging Infrastructure Trends from the Alternative Fueling Station Locator: Third Quarter 2023, NREL)

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U.S. V2X Status

In the U.S., V2X is a favorite topic of conversation – lots of talk with little action. The problem is highly restrictive grid interconnection regulations.

There are three general technologies under evaluation:

1. AC V2G pilots promoted by Ford, GM and Stellantis.
2. School bus demonstration projects using proprietary solutions with the CCS connector.
3. Light duty demonstrations projects using CHAdeMO.

- Progress – California Energy Commission created a list allowing utility company interconnection groups to see what V2G equipment is compliant to regulatory requirements. Currently, there are 9 models from three manufacturers on the "V2GEL" list.

CHAdeMO NA is currently actively supporting projects using CHAdeMO technology and more is expected in 2024.

The State of US Public DC Fast Charging - NACS

The National Focus is NACS.

- Industry, Government and consumers are expecting NACS to solve all the public charging problems.
- Unfortunately, few are paying attention to the details – NACS is not the same as Tesla Supercharging. NACS is a repackaging of CCS-1 using a Tesla connector.
- Adaptors are vital for NACS use with legacy CCS-1 vehicles, but no effective safety standards or enforcement currently exists.
- The SAE J3400 Task Force is rushing to produce a "paper standard" before the end of 2024 without thorough development and testing.
- No current plan for bi-directional V2X using NACS - a "future" item.

Three Connectors, one EVSE - CCS-1, CHAdeMO and Tesla

The U.S. National Electric Vehicle Infrastructure (NEVI) Formula Program funded stations are just starting operation.

- Only eight stations in six states with 33 public charging ports in operation.

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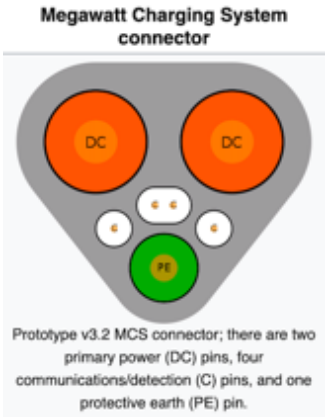
The State of US Public DC Fast Charging – Megawatt Charging System (MCS)

SAE J3271 - MCS Standard for Heavy Duty Vehicles

Described as “the megawatt-level DC charging system”, SAE is developing the requirements for couplers/inlets, cables, cooling, communication and interoperability. The intended application is for commercial vehicles with larger battery packs requiring higher charging rates for moderate dwell time.

- Expecting Technical Information Report (TIR) version 1 publication soon. The goal - complete the Recommended Practice by end of 2024. (Unlikely due to NACS)
- Importantly, the J3271 task force is actively pursuing CANbus communication as all attempts to use CCS-1 PLC failed.
- J3271 members are asking to understand CHAdeMO 4.0/Ultra-ChaoJi. It may be possible to incorporate the same communications protocol for SAE J3271. CHAdeMO NA is working to provide information.

March 21, 2024 - ABB E-mobility and MAN Truck & Bus charged with more than 700 kW and 1,000 A at an MCS charging station from ABB E-mobility.



Prototype v3.2 MCS connector; there are two primary power (DC) pins, four communications/detection (C) pins, and one protective earth (PE) pin.

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2024 Plan for CHAdeMO Promotion in U.S

In 2024, CHAdeMO NA will:

- Actively support V2X projects using CHAdeMO technology.
- Observe development of other V2X standards.
- Participate and report on the SAE J3400 NACS efforts.
- Participate and report on the SAE J3271 MCS efforts.
- Report on U.S. EV Charging Cybersecurity developments.
- Represent CHAdeMO with influential government agencies.
- Expand the Social Media effort managing CHAdeMO's reputation in the U.S.

EVS-36 Exhibit

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Thank you

David N. Patterson, P.E.
CHAdeMO NA
patterson@chademo.org
www.chademo.com