

January 22, 2025

Submitted electronically via dps.ny.gov

Honorable Michelle Phillips
Secretary State of New York Public Service Commission
Building Three Empire State Plaza
Albany, NY 12223-1350

RE: Case No. 18-E-0138 – Proceeding on Motion of the Commission Regarding Electric Vehicle Supply Equipment and Infrastructure

Dear Secretary Phillips:

On November 22, 2024, the Commission filed a notice soliciting comments in response to Department of Public Service (DPS) Staff questions in the above subject case regarding the J3400/NACS connector standard. Tesla put forth its position on the non-proprietary status of the J3400 connector standard given developments over the past year and provided a market update in the context of New York as part of the Technical Conference hosted by NY DPS on January 15th, 2025. Tesla appreciates this opportunity to follow up on the J3400/NACS presentation from the Technical Conference and provide written comment.

About Tesla

Tesla is a manufacturer of electric vehicles, energy storage equipment, EV charging equipment, and is also a charging network owner and operator. Tesla operates 49% of the DC fast charging ports in New York¹ and proudly manufactures its industry leading Supercharger equipment at Gigafactory New York in Buffalo, NY.

Tesla's mission is to accelerate the world's transition to sustainable energy through the development, manufacture and sale of all-electric vehicles and clean energy products, including photovoltaic solar and battery storage. All Tesla vehicles sold in the United States are currently manufactured in Fremont, CA and Austin, TX. Tesla's vehicle line-up includes the Model S sedan, Model X crossover vehicle, Model 3 sedan, and Model Y crossover vehicle. The vehicles have an all-electric range of up to 405 miles per charge (Model S) and industry-leading performance and safety ratings. In 2024, Tesla delivered more than 1.7 million vehicles globally² and in December 2022, the company delivered its all-electric Class 8 Semi trucks to the first customer.³ Additionally, in November 2023, Tesla completed the first deliveries of its newest vehicle, the Cybertruck pickup truck.⁴

¹ <https://afdc.energy.gov/stations#/analyze?tab=location>

² <https://ir.tesla.com/press-release/tesla-fourth-quarter-2024-production-deliveries-and-deployments>

³ <https://www.cbsnews.com/news/tesla-electric-semis-delivered-to-pepsico-nevada-factory/>

⁴ <https://www.tesla.com/cybertruck-delivery-event>

DPS Staff Questions on recent developments by the Society of Automotive Engineers (SAE) to standardize the North American Charging Standard (NACS) as SAE J3400

1. What is the anticipated timeline for the standardization and market readiness of J3400 EVSE products and when do stakeholders anticipate widespread availability of J3400 EVSE products?

There are suppliers that are able to support J3400 connectors today given NACS technical specifications are available for anyone to use. Tesla is not aware of any unique supply chain constraints that solely impact J3400 connectors. The anticipated timeline for the SAE final standardization of J3400 is mid-2025.

a. Is there anticipated to be a difference in market supply or developer interest in J3400 EVSE for L2/AC charging versus DCFC charging?

J3400 products are available for both L2/AC charging and DCFC charging. Most of the responses here focus on the use of J3400 connectors in the context of public DCFC, however L2 and DCFC should have similar demand as the market fully transitions from CCS1/J1772.

b. Are there any notable differences between Combined Charging Standard (CCS) and J3400 technical standards?

The physical geometry of the connector is the most notable difference between the two technical standards. There is not a fundamental software/firmware/communication protocol difference between the two standards that enables some functionality on one that would not be available on the other standard. In practice, J3400 connectors have proven to be more reliable and break less easily given the latch mechanism that locks the connector in place is located on the vehicle side rather than located on the connector itself in the case of CCS.

c. Will J3400 EVSE be capable of meeting the program rules of the Make-Ready Program such as the software and hardware requirements?

Yes, J3400 is capable of charging vehicles using ISO 15118.

d. Is it feasible or practical to retrofit existing EVSE to a different connector (i.e., CCS to J3400)?

All of Tesla's light-duty EVSE products include the J3400 connector.

2. At this time, which plug types should be considered non-proprietary?

At this time, J3400 and CCS plugs should both be considered "non-proprietary."

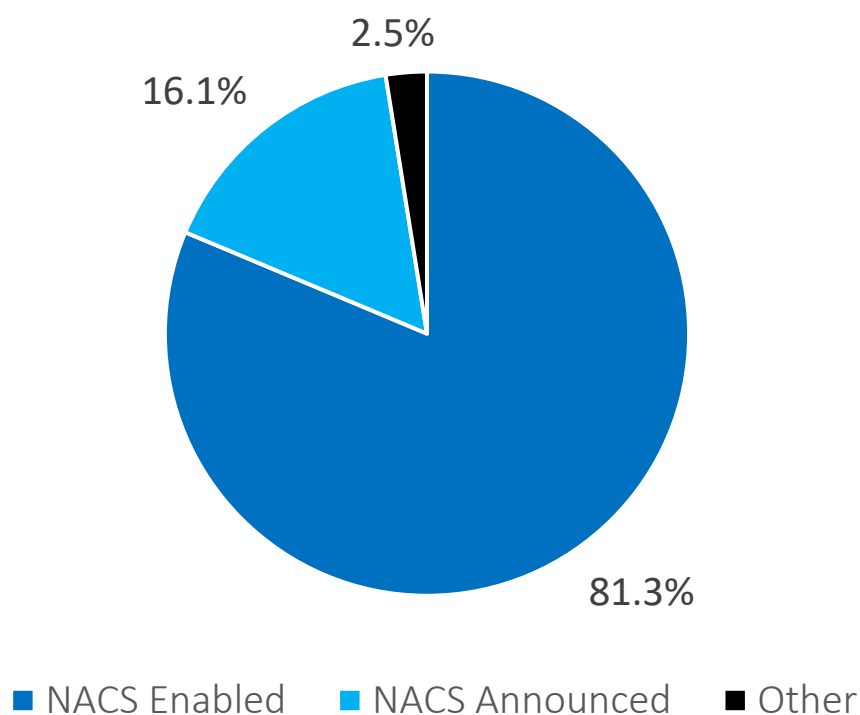
a. Do you consider J3400 to be non-proprietary at this time, given expected timelines for standardization and adoption? Why or why not?

Yes, J3400 is a non-proprietary standard at this time with the SAE Recommended Practice (RP) published in September 2024 and multiple original equipment manufacturers (OEMs) being able to charge using the J3400 connector already.

List of OEMs currently supported to charge on Tesla's Supercharger network using J3400 connectors: ⁵

Supported	Coming Soon
Ford	BMW
Rivian	Genesis
General Motors (GM)	Hyundai
Volvo	JLR
Polestar	Kia
Nissan	Lucid
	Mercedes-Benz

Beyond the numerous and quickly expanding list of OEMs able to charge on J3400 connectors, 81% of BEVs in New York are already enabled to charge on J3400/NACS: ⁶



b. Should J1772 and CCS continue to be eligible for incentives? If so, at what level?

For the sake of continuity, it does not make sense to abruptly stop eligibility of J1772 and CCS. However, it is worth considering whether or not there should be a cut off date starting in 2027 and beyond where CCS funding would be at a reduced level. It is likely investment in CCS will naturally decline as the vehicle market shifts to J3400 so Tesla's preference is to open the non-proprietary incentive funding to J3400 and allow individual developers to decide what is best for their particular situation in the near term.

⁵ <https://www.tesla.com/NACS>

⁶ Battery Electric Vehicle (BEV) registration numbers for New York State pulled from Atlas EV Hub, accessed 1/14/25.

3. What is the anticipated timeline for the adoption of native J3400 ports on future electric vehicles?

In calendar year 2025 the first vehicles from other OEMs will be released with native J3400/NACS inlets. Starting in calendar year 2026 and beyond, new EV product offerings from other OEMs are expected to be released with native J3400/NACS inlets.

a. Are there any challenges that may lead to delays of the currently proposed automaker timelines?

Tesla is not aware of any anticipated challenges to call into question the proposed automaker timelines.

4. What is the current outlook on the use of combined connectors (i.e., Tesla's Magic Dock or ChargePoint's Omni Port)?

Combined connectors such as the Tesla "MagicDock" are a helpful tool during this time of connector transition to one universal North American standard, however, the expectation is these products will eventually be phased out when the industry transition to J3400/NACS is complete.

a. What additional costs are incurred in the installation and maintenance of EVSE with a combined connector in comparison to equivalent non-combined connector EVSE?

Although there are some additional upfront initial installation costs, the more concerning additional costs come from ongoing maintenance as the combined connector introduces a potential point of failure. Since many stations are in remote locations and typically do not have a representative from the charging operator onsite, any additional maintenance can be costly and is to be avoided.

5. What is the anticipated role of adapters in the transition to J3400? Will J3400 adapters be capable of both AC and DC charging?

Adapters are another important tool that will help enable the transition to a universal J3400 connector standard in North America. Adapters will be charging-type specific (i.e. AC or DC) and will not be used interchangeably for AC and DC charging. Adapters are available for both AC and DC charging and are being distributed by OEMs to their customers in the context of DC charging to enable access to Tesla's Supercharger network.

a. What is the anticipated timeline for the full standardization of adapters including safety certification and availability on the market?

As of today, EV customers should only use OEM-approved adapters, as non-OEM certified adapters may present safety and operational issues.

6. What are the expectations on the use of J3400 for medium- and heavy-duty vehicle charging? a. What is the current outlook on charging in the medium- and heavy-duty market as a whole? Do MHD automakers anticipate coalescing around one connector type?

J3400 is not currently expected to be the connector standard for heavy-duty vehicle charging. J3400's technical specifications give it an effective maximum power output of 1 MW. Since heavy-duty vehicles are expected to charge up to 1.2 MW (and beyond in the future), the Megawatt Charging System (MCS) is expected to be the connector standard of choice for heavy-duty charging.

There is an expectation that MHD automakers will coalesce around using the MCS as a universal connector at those higher power levels (above 1 MW) once the MCS standard is finalized.

Conclusion

Tesla appreciates the opportunity to provide written comments and the Commission's timely consideration of these questions related to non-proprietary connectors among a rapidly evolving charging landscape. The continuation of New York's Make-Ready Program with improvements will help encourage deployment of DCFC infrastructure and increase adoption of EVs in New York State. As shown in the registration data, 81% of BEVs in New York are already J3400/NACS-enabled and that number is expected to quickly jump to 97% by the end of 2025. Tesla would like to thank the many OEMs who have come into agreement around the J3400/NACS standard to make the goal of a universal charging connector standard a near-term reality.

Respectfully submitted,

A handwritten signature in black ink that reads "Bill Ehrlich". The signature is written in a cursive, flowing style.

Bill Ehrlich

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