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MN8 Energy Comments_Response to CEC RFI - Medium- and Heavy-Duty Zero- Emission Vehicles & Infrastructure

Additional submitted attachment is included below.

2/7/2025

California Energy Commission
1516 Ninth Street
Sacramento, CA, 95814
Docket No: 19-TRAN-02

Re: Request for Information - Medium- and Heavy-Duty Zero-Emission Vehicle Public Charging

To whom it may concern,

MN8 Energy LLC (MN8) commends the California Energy Commission's (CEC) continued efforts to accelerate the deployment of charging infrastructure for medium-duty and heavy-duty (MDHD) electric vehicles (EV). In times of regulatory uncertainty, CEC funding programs are critical to stimulate this nascent, yet quickly growing market.

MN8 develops, owns, and operates renewable energy generation facilities, battery energy storage systems (BESS), and EV charging stations. Today, we provide clean, affordable, and reliable energy to over 200 world-class enterprise customers and operate a fleet of over 850 energy projects, comprising approximately 3 gigawatts (GW) of solar photovoltaic (PV) and BESS capacity spread across 28 US states. We are also partnering with various customers, such as vehicle OEMs and fleet operators, to develop EV charging solutions for light-, medium-, and heavy-duty vehicles with the goal of delivering a reliable and high-quality experience to EV drivers and fleet operators.

MN8 appreciates the CEC's recognition of the unique charging configurations required by MDHD fleet operators to successfully electrify their operations. As outlined in the Assembly Bill 2127 Second Electric Vehicle Charging Infrastructure Assessment and the CEC's 2024 Zero-Emission Vehicle Infrastructure Plan, depot and en-route chargers will be necessary to ensure all types of fleets can conveniently and efficiently charge their vehicles with minimal disruption to their operations. In addition to this, shared charging hubs, where multiple fleets use a single charging location, will play a vital role in allowing fleets of different sizes and vehicle types to access charging.

Thank you,

Stephanie Williams
Director, Regulatory and Government Affairs
MN8 Energy
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What does the CEC need to consider when developing "public" / en route charging eligibility criteria for CEC funding opportunities?

MN8 believes the CEC should allow "shared charging hubs," where multiple fleets use the same charging location, to access critical incentives driving the buildout of public MDHD charging infrastructure. These hubs may take various flavors: they may be fully private but grant multiple fleets equal opportunity to access a single location through reservations in some form; or they may combine private and public elements at the same site, where certain chargers are limited to specific fleets, and others are not. Ultimately, fleets need certainty that they will be able to arrive at a charging hub and immediately commence charging. Without this certainty, they will not be able to effectively incorporate EVs into the complicated logistics that underpin their operations. Additionally, project owners need the ability to secure long-term contracts and maximize the level of utilization at their sites in order to efficiently underwrite these capital-intensive assets. Given the nascency of this sector, we would caution the CEC against being overly prescriptive with regards to which configurations and operating paradigms can qualify for incentives. Allowing various forms of shared charging hubs will enable the companies financing and operating these hubs to introduce products that co-optimize project economics and project finance with fleets' need for a tailored and predictable product around which they can efficiently operate.

How should the CEC plan for the state's future MDHD charging needs to both accommodate fleets that will need access to chargers while en route to a destination (similar to the diesel truck stop model where the ports are fully publicly accessible first-come-first-served) vs. fleets that need certainty that charging will be available and accessible when it comes time to charge (the reservation system model)?

CEC funding opportunities should allow for a flexible approach to charging access configurations, including both the first-come-first-served model and/or the implementation of reservation features. The market is young and continuously evolving at a rapid pace. Operators of MDHD charging hubs should be allowed to test new technologies and features that will ensure fleets can charge their trucks without disruptions while efficiently allocating vehicles to chargers. This uncertainty in fleet operations is noted in the CEC's 2024 Zero-Emission Vehicle Infrastructure Plan:

> "There are uncertainties about what a mature MDHD EV charging system will look like, so it is difficult to prioritize one charging type over another at this time. To support the needs of these vehicles, high-speed local charging ports will need to be installed near their existing destinations. These high-speed local charging ports may be installed by fleet operators, third-party depot operators, or charging-as-a-service operators near MDHD vehicle destinations."[1]

It is important to recognize that EV charging is fundamentally different from diesel fueling. While diesel fueling is predictable and takes only 10–20 minutes, EV charging can take well over an hour depending

[1] Lopez, Thanh, Adam Davis, Brendan Burns, Magdulin Dwedari. 2025. *2024 Zero-Emission Vehicle Infrastructure Plan: Deployment Strategy 2025 – 2030*. California Energy Commission. Publication Number: CEC-600-2025-002.

on the vehicle's state of charge and battery architecture. This creates inherent challenges to integrating electric MDHD vehicles into existing supply chains, but these can be mitigated with thoughtful scheduling and planning. However, first-come-first-served chargers can lead to queueing that results in unpredictable wait times, causing significant disruptions to fleet operations. Charger accessibility can substantially impact a fleet's ability to meet pickup and drop-off schedules and adhere to regulated drive-time limits if not carefully planned.

Fleet operators utilizing "public" charging hubs will therefore need to have the ability to reserve chargers prior to arrival to ensure their vehicles can charge without risking delays that disrupt their operating schedules. To address this need, flexible reservation systems—including same-day, multi-month, or even annual reservations on a by charger or by time slot basis—should not be discouraged. These systems will allow fleets to plan charging around their operations rather, making charging a predictable variable.

MN8 supports flexibility in funding criteria to allow charging operators and fleets to test both reservation and first-come-first-served models while also ensuring efficient site utilization and viable long-term project financing. Given the rapid evolution of the market, MN8 recommends that the CEC avoid overly prescriptive policies around operating models and instead allow charging hub operators to determine the best mix of reservation-based and on-demand access models given real-world utilization patterns and particular site-by-site considerations and fleet needs.

Is a reservation system for use of public chargers needed to meet the needs of the trucking industry?

Yes, a reservation system is needed to meet the needs of the trucking industry. Many truck operators utilize an appointment-based delivery system which dictates when they drop and pick up loads. Because truck operators have limited hours to complete their deliveries and pick-ups, they cannot afford to miss a delivery or pick-up appointment due to unpredictable delays in charging. The ability to use a reservation system will ensure truck drivers can schedule their charging sessions in advance, limiting potential disruptions to their operations and ensuring they don't miss their delivery and pick-up windows.

Should there be a certain percentage of chargers available to the public at all times? Should there be a certain percentage of chargers available for reservation at all times?

There should not be a requirement that a certain percentage of chargers be made available to the public at all times. Relatedly, it should be permissible for all chargers to be reservable at a public MDHD charging station. Implementing a reservation system does not preclude a station from being available to the public; indeed, reservations will often be made available to drivers through a public process, and station owners will do everything that they can to maximize utilization of chargers by efficiently matching supply and demand while also designing a product that meets fleets' needs. It is important that chargers can be reserved for a specific window of time well in advance—from minutes to years in advance—to ensure reliable access to charging. As the MDHD ZEV trucking and charging market evolves, operators of charging hubs should have the ability to test new technologies and products that can efficiently allocate truck drivers to chargers on their site in innovative ways.

The CEC's Clean Transportation Program administers public funding, which must provide a benefit to the state. How does a project with a reservation system benefit the state of California?

EV charging projects with a reservation system benefit the state by allowing a greater number of MDHD truck operators to electrify without the concern that there will be disruptions to their fleet operations. One of the primary barriers making MDHD fleet operators hesitant to electrify is the complication to their existing logistics that comes with the need to charge EVs. Reservation systems will enable charging operators to test innovative solutions that allow for small-and medium sized fleets, many of which are hesitant to electrify, to reliably access charging for their trucks.

Please describe your optimal public charging network that is a mix of first-come-first-served and reservation systems throughout CA.

An optimal public charging network allows charging operators to offer charging features and configurations that best support the fleets utilizing the chargers. The CEC should allow operators of charging hubs to test and identify features and commercial arrangements that best serve the fleets while also allowing for efficient project finance arrangements. The ratio of reservable vs. non-reservable chargers at a site may vary depending on the vehicles and types of fleets using the site, the site design, the infrastructure owner's capital stack, and more. MN8 recommends that the CEC holds off on implementing a prescriptive standard for reservation features in MDHD charging funding programs until the MDHD ZEV market has more time to develop and mature.