

**DOCKETED**

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**TeraWatt Comments on CEC Medium- and Heavy-Duty ZEV Fueling Infrastructure Funding Concept**

*Additional submitted attachment is included below.*



California Energy Commission  
715 P Street  
Sacramento, CA 95814

April 14, 2023

**TeraWatt Infrastructure Comments on the March 28, 2023 Staff Workshop on a Potential Solicitation for MDHD Charging and Hydrogen Refueling Infrastructure on Designated Corridors**

Dear Commission Staff,

TeraWatt Infrastructure, Inc. (TeraWatt) appreciates the opportunity to submit comments on the potential future changes to the CEC in regard to docket number 19-TRAN-02 – the Potential Solicitation for MDHD Charging and Fueling Infrastructure Projects on Designated Corridors. TeraWatt is a project developer and long term owner of high powered EV charging infrastructure for light, medium and heavy duty commercial fleets.

TeraWatt is interested in developing charging centers for medium- and heavy duty vehicles in California and offers comments on several of the proposed program concepts and discussion questions from the March 28 workshop:

**Public Fueling Requirement:**

The intermixing of public light duty vehicles amongst medium- and heavy-duty vehicles presents adverse safety implications to all users of the fueling infrastructure. MDHD vehicles typically require dedicated fueling infrastructure with current combustion engine fueling, such as much greater prevalence of diesel over gasoline fuel. Fueling infrastructure differences will also be prevalent as these vehicles transition to battery electric operation, such as different charging ports. Today though, light duty applications for use at medium- and heavy-duty fueling stations should not be encouraged in order to ensure driver safety, efficient fueling, and based on technological capabilities of vehicles to accept a higher power charge.

Additionally, TeraWatt recommends that site access requirements in the funding program align with similar requirements to the already proposed draft regulatory text in the Low Carbon Fuel Standard MDH HRI<sup>1</sup>:

*The **site** must be open to at least two different vehicle fleet companies, and no formal or registered equipment training shall be required for individuals to use the electric vehicle charging infrastructure.*

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<sup>1</sup> § 95486.3.(a).4.B Generating and Calculating Credits and Deficits for Medium- and Heavy-Duty ZEV Fueling Infrastructure Pathways



### **Schedule Requirements:**

Grant solicitations and contracting time frames may significantly impact project development schedules, with the potential for disruptions and delays. Projects adhering to a CEC grant cycle which are disallowed from entering supplier contracts or placing orders prior to grant agreement execution will require at least 2 years from the grant submission date to come online. Such a prolonged development timeline may risk power availability from a local electric utility, since project development and initial service request may start up to a year prior to grant submission to ensure project viability for a grant. TeraWatt strongly recommends that CEC allow for long utility interconnection timelines for full power availability for awarded projects as long as 25% of the project's planned power is achievable within 2.5 years of the grant submission date.

### **Standard Equipment:**

TeraWatt appreciated that CEC is seeking to establish alignment with the existing equipment eligibility requirements outlined in the EnergIIZE program and we agree that standardization across programs leads to a better overall solicitation process. TeraWatt also encourages CEC to allow for reasonable exceptions and additions to the EnergIIZE Eligible Electric Equipment list after grant award, as new equipment and advanced technologies become commercially available, specifically because of the need to incorporate MegaWatt Charging Standard (MCS) EVSE in the future.

### **Minimum number of chargers, dispensers, and capacity:**

This is highly dependent on use cases and should remain flexible in order to accommodate a variety of vehicle customers and duty cycles. CEC funding will be most beneficial for fast charging applications with chargers initially capable of at least 250kW, with emphasis on 1MW when the technology becomes commercially available. Fast charging such as this will allow for higher utilization rates due to all day use by multiple fleet operators.

### **Mixed use stations and extra points:**

Extra points should not be given to stations using both electric and hydrogen. The use of two differing technologies significantly increases the risk of failure and will impact station uptime. Trucks using these different fuel types are not the same and will not need to go to the same place to refuel.

### **Designated Corridors**

TeraWatt understands that CEC intends to use the currently proposed SB 671 Alternative Freight Corridors as a guide to determine optimal locations for projects funded by future MDHD grant solicitations; however, TeraWatt strongly recommends that CEC expand upon the proposed corridors to accommodate for power scarcity and real estate constraints which are particularly prevalent in California as opposed to other states. An expanded definition of designated corridors



will also ensure regional operators are sufficiently served on and near existing routes. Designated corridors should include the segments of:

- Northern California - I-880 extending south from the Port of Oakland to the Oakland International Airport vicinity
- Northern California I-580 from the I-238 interchange in Hayward to I-5
- Northern California - I-205
- Southern California - I-405 from LAX to the I-5 interchange in Irvine
- Southern California - Route 91 from the I-110 interchange to the I-5 interchange in Anaheim

Additionally, the eligibility criteria for a site's distance from a designated corridor should be 2.5 miles to account for real estate and power restrictions.

As CEC considers program design for recurring solicitations, TeraWatt recommends funding eligibility for future phases of projects to expand capacity and incorporate new technologies, such as MCS, as they become commercially available. Recurring solicitations may be issued multiple times per year, with each funding opportunity focused on specific corridors or segments in order to best address corridors with the highest rates of electric truck traffic.

**Well thought out business plans:**

As previously discussed in response to Schedule Requirements, the disallowance of pre-award cost incurrence creates significant delays to contracting and project development. To thoroughly support well thought out business plans at the time of grant application, the solicitation guidance for eligible expenses should allow pre-award costs which will allow contracts with suppliers to be in place to facilitate faster project delivery. If suppliers are allowed to be under contract earlier, it will signal an earlier commercial operations date and allow customers to be engaged. Customer contracts, contributing to a project's business viability or plan, are far less likely if a project delivery date is two years or more out in the future.

**Potential risks and mitigations:**

Timeline delays are the most prevalent risk to grant projects. The time necessary to receive an award and execute a grant agreement, in addition to the inability to pre-procure major long lead time equipment, can jeopardize projects, especially power interconnection, as well as slow down overall building. This risk can be mitigated through the creation of a standard incentive or rebate program. For projects reaching COD and meeting certain eligibility criteria it would be more efficient and less of an administrative burden than to issue a full solicitation.

**Other considerations:**



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If CARB establishes a Fast Charging Infrastructure (FCI) credit for MDHV charging facilities with geographic limitations, the CEC should consider developing grant funding opportunities that specifically target those projects that are *not* eligible for FCI based on geography requirements.

CEC should also consider this funding to be used for an EnergIIZE-like program, but which is available to all projects serving multiple vehicle fleets when each reaches COD.

The CEC has indicated that 53 new installed MDHV EVSE per day are required to support the Advanced Clean Fleets (ACF) rule, if passed. As such, the CEC should structure grant funding to maximize funding opportunities for all projects across funding sources and streamline grant processes to not slow down deployments.

Sincerely,

David Schlosberg  
VP, Energy & Utilities