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Additional submitted attachment is included below.

Responses to CEC Charging Infrastructure Questions

1. Considerations for Developing "Public"/En Route Charging Eligibility Criteria for CEC Funding

When developing eligibility criteria for public or en route charging, the CEC should prioritize sites located near major freight corridors, ports, and existing truck stops to maintain established routing patterns for drivers. Charging speeds should be scaled, with funding incentives for higher-powered chargers to minimize charging times and increase charger availability. Funding should also account for both hardware and installation costs to ensure comprehensive project support. Additionally, driver amenities such as break rooms with Wi-Fi, vending machines, tables, and chairs should be encouraged to enhance the charging experience.

2. Planning for Future MDHD Charging Needs

A balanced mix of first-come-first-served (FCFS) and reservation-based chargers is critical to address the varied needs of fleets. This mix should be managed by advanced software that dynamically adjusts allocations based on real-time demand patterns and utilization data. In densely populated areas, a combination of FCFS and reservation-based chargers will ensure flexibility and predictable access, while in lower-density areas, a stronger emphasis on reservation-based systems may better serve fleets with consistent needs.

3. Necessity of Reservation Systems for Public Chargers

Reservation systems are crucial for fleets operating on consistent and repeatable routes, as they reduce reliance on origin-site charging equipment and alleviate range anxiety. Although current charger utilization remains low, at less than 10%, reservation systems will become increasingly essential as the adoption of MDHD vehicles grows.

4. Existing Reservation Systems for Multi-Fleet Use

Systems that support multiple trucking companies should include features like real-time availability updates, scheduling capabilities, and usage tracking to ensure efficiency and accessibility for all users. In addition, integration with vehicle telematics would improve efficiency and safety.

5. "Trucking-as-a-Service" (TaaS) Model Impact on Public Charging

TaaS models, such as those operated by Penske, offer financial and operational benefits to fleets by providing packaged vehicle rental, leasing, maintenance, and fueling options and allowing fleets to focus on their core business. Considering that 80% of MDHD fleets lease their vehicles, funding strategies should be designed to accommodate this leasing trend. MDHD fleets rely on contractual agreements to ensure competitive pricing and guaranteed timely access to services. Although public charging is a consideration, Taas or rental/leasing models rely on these contracts to manage investment ratios and ensure competitive and guaranteed access that fleets demand.

6. Percentage of Public and Reservation-Based Chargers

Publicly available charge lots should maintain a mix of FCFS and reservation-based chargers. This approach balances the need for urgent operational flexibility with guaranteed access for

fleets on predictable routes. Advanced software should dynamically manage this allocation to respond to changing demand and utilization patterns.

7. Ideal Reservation System or Process

The ideal reservation system should be user-friendly, incorporating a web application with real-time updates, automatic weekly recurring bookings, and notifications for unexpected changes or issues. The system should also display real-time charger availability to minimize unnecessary reservations.

8. Ratio of Reservation vs. FCFS Chargers

A balanced mix of FCFS and reservation-based chargers should be maintained, with the system transitioning to include a higher percentage of reservation-based chargers as demand grows. Software should actively monitor utilization to optimize this balance.

9. Preferred Site Configuration

The optimal site configuration would allow all chargers to be reservable but also accessible on a FCFS basis if unreserved. Providing drivers with advance visibility of charger availability would improve planning and efficiency.

10. Protocol for Overlapping Reservations and FCFS Use

To address conflicts between reservations and FCFS use, advanced reservation software should manage reservations and direct users to available chargers. Alternatively, separating chargers into exclusively FCFS or reservation-only categories may simplify operations and reduce user friction.

11. Benefits of Reservation Systems for California

Reservation systems can reduce congestion, waiting times, and negative driver experiences in high-traffic areas. They incentivize fleets to transition to zero-emission vehicles by providing reliable charging access. Additionally, predictable demand patterns enabled by reservation systems can attract private investment alongside public funding.

12. Driver Safety and Equipment Protection for Public Chargers

Smaller charging sites could potentially operate without onsite attendants, provided maintenance teams are available to address vandalism or malfunctions within a 24-hour timeframe. Ideally a site attendant would be present to increase site efficiency, assist drivers with the technology, and ensure reliability and safety.

13. Standardization and Communication Protocols

Standardization should include OCPP-compliant chargers, compatibility with Plug-and-Charge standards, and availability of CCS1 and NACS connectors. Integration with fleet telematics systems would streamline adoption, minimize driver distractions, and enhance overall efficiency.

14. Optimal Public Charging Network Configuration

The optimal network would consist of a balanced mix of FCFS and reservation-based sites, with dynamic allocation managed by advanced software. This approach balances flexibility with guaranteed access where needed.

15. Optimal Site Configuration

An optimal site configuration would initially feature a 50/50 split between FCFS and reservation-based chargers. This ratio should be reviewed annually and adjusted based on utilization rates and demand growth, with software guiding these adjustments.

16. Optimal Reservation System Rules and Parameters

The reservation system should limit reservations to a specific percentage of available chargers, with some slots reserved for longer-term contracts. Remaining reservation slots should be open for booking with a 24-hour notice. If chargers remain unreserved, they should be available on short notice for FCFS use. Dedicated reservation chargers should have clear time slots with 15-minute buffers to accommodate delays. The system should also allow FCFS charging at unreserved chargers to ensure optimal utilization while clearly communicating and managing session limits through software.