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October 17, 2022 Comment letter submitted via electronic commenting system

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Re: Truckee Donner Public Utility District Comments on Draft Regulatory Language for the Advanced Clean Fleets Regulation Public Fleet Requirements

The Truckee Donner Public Utility District (TDPUD) appreciates the opportunity to again provide public comments to the California Air Resources Board (CARB) in response to the recent Draft Regulatory Language on Public Fleet Requirements (Draft Rule). The TDPUD is a not-for-profit, community-owned and locally governed public utility that provides essential water and electric services while supporting community safety and emergency response. While we appreciate some recent changes to the Draft Rule, in particular regarding the low population county clause, we remain deeply concerned about the current Draft Rule's potential negative impacts on critical infrastructure and our ability to support public safety and emergency response for our community.

TDPUD's Fleet of Specialty Trucks Must Be Able to Do Essential Work in the Field:

The TDPUD operates in the high Sierra Nevada Mountains at elevations between 6,000-9,000 feet with winter blizzards, atmospheric rivers/floods, severe thunderstorms, and wildfires. Maintaining critical infrastructure and supporting public safety and emergency response requires specialized 'vocational' fleets with off-road, 4x4, and custom bodies. Almost all field vehicles require robust Power Take Off (PTO) capabilities to run cranes, buckets, motors, compressors, pumps, vacuums, and a variety of equipment needed to operate a water and electric utility plus support emergency response

It is important to note that TDPUD is a small utility with less than 100 employees and less than 100 vehicles in our fleet. Every vehicle in our fleet (MD/HD) serves multi-purposes. A truck with removable snow removal attachments (blowers and blades) is used for construction projects in the summer. In addition, TDPUD's fleet must both have the capability to travel long distances (including mutual-aid response) along with responding to power outages or water emergencies where the truck will travel less than 10 miles but may remain in the field for many days with remote fueling until the job is done.



Electric Utility Repair During Historic December, 2021 Storms

For the last two years we have been working directly with CARB staff and Board to raise awareness of the key roles played by public water and electric utilities in maintaining critical infrastructure, providing essential services and supporting public safety and emergency response. A majority of our fleets must be available 24/7/365 and, in extended emergencies, all of our fleets play a role and are specified for the most extreme conditions. California was the first to recognize the human right to water and TDPUD is obligated under State and Federal law to provide this critical service. However, water and electric utilities are not formally considered “essential services” nor “emergency response”.

TDPUD has participated in CARB workshops and provided written and verbal comments with the goal of informing the regulation. We have directly raised concerns about:

- The unavailability of commercially viable ZEV's
- The need for 1:1 replacement
- The ability to work and refuel in the field for many days; and
- The severe negative impacts to rates and community safety.

TDPUD is an active participant in a number of joint action groups (Association of California Water Agencies - ACWA, California Municipal Utilities Association - CMUA, and Northern California Power Agency – NCPA) to ensure that we understand the Draft Rule, can help improve the regulation, and raise our concerns. We strongly encourage CARB staff and Board to continue to engage with ACWA, CMUA, NCPA, and SCPA. We strongly support their numerous verbal and written comments already provided along with the letters submitted at the same time as this one.

TDPUD is bound to responsibly serve the public and to operate in an open and transparent manner. We are not like the vast majority of the fleets covered under the Public Fleets Draft Rule which are used to transport people, goods, & materials. The job of an electric and water utility fleet only starts once it has reached the job site. Crews and trucks must be prepared to keep the public safe, the lights on, and the water flowing during blizzards, wildfires, floods, and other emergencies. We must also comply with public meeting laws/regulations, follow public procurement rules and bid processes, and ensure that our communities are protected.

Key Opportunities to Improve the Draft Rule:

- **The specific role and needs of water and electric utilities must be considered in the next Draft Rule.** Crews and trucks must be able to perform critical work in the field for extended periods of time with or without the grid. This is especially true of the challenging environment in which the TDPUD operates. It is important to note that Public Fleets MD/HD vehicles represent a very small percentage of the overall transportation GHG emissions that CARB is targeting and water and electric utilities represent a small fraction of Public Fleets. The TDPUD recognizes that addressing our unique needs may not be possible in the context of the overall Public Fleets objectives. We welcome any suggestions from CARB staff and Board on how to address this incompatibility.
- **A robust definition of commercial availability along with an independent panel of experts needs to be established.** It has been widely documented and presented to CARB Board and staff that the vast majority of ZEV's required by electric and water utilities do not exist today and likely won't for 5-10++ years. Many consider the Ford F150 Lightning commercially available but utilities have ordered hundreds, received a handful, and lead times are many years. This raises particular concern since these are light duty trucks with a wide market base for which manufacturers have greater incentive to make readily available. This vehicle is not even part of the Draft Rule (starts at F250 equivalents and larger).

True commercial availability for ZEV's has been further compounded by the COVID and global supply chain crisis. CARB staff has stated repeatedly that lead-time/availability is not an issue for compliance since it is based on placing an order. For an electric and water utility, not having a key truck for many years required to

maintain critical infrastructure, provide essential services, and support emergency services is not acceptable.

TDPUD strongly supports the proposals for commercial availability and some sort of expert/independent panel provided in the most recent ACWA comment letter and the joint ACWA/CMUA/NCPA/SCPPA comment letter. These comment letter reflect the overwhelming support of the 50+ public owned electric utilities and the public water utility community.

- **The Exemption for Snow Removal Equipment Needs to be Modified to Address Actual Equipment Used.** We appreciate that CARB has identified snow removal as a critical function to keep our communities accessible and safe. During the recent historic December, 2021 storms, which brought 20 feet of snow over a two week period, TDPUD spent extended time moving snow to access key facilities, repair damage, and support emergency response. This was critical to maintaining essential electric and water services and responding to emergencies. TDPUD's snow removal efforts also supported overall Town of Truckee, Nevada & Placer County, and State snow removal efforts.

However, the current Draft Rule still requires 'dedicated' snow removal equipment to qualify for the exemption. Not a single truck in our region that is covered by the Draft Rule has a permanently attached blade (we tend to use blowers more than blades) and all of our fleets serve multi-purposes (doing snow removal in the winter and construction projects for the rest of the year, for example). This is especially true for small/medium sized utility/agency fleets (<100 vehicles) but applies to any size organization since no public fleet in California does significant snow removal for more than 4-5 months per year. We again respectfully request that the Draft Rule incorporate an accurate understanding of snow removal fleets, reflect the reality that almost every vehicle in a fleet serves multi-purposes, and preserve our ability to move snow and access critical facilities during outages and emergencies.

- **The Draft Rule must maintain the principal of one-to-one replacement.** The TDPUD believes that CARB must design the Draft Rule in a way that ensures a one-to-one replacement for a vehicle to be commercially available. The TDPUD, Northstar Community Services District, Tahoe City Public Utility District, North Tahoe Public Utility District, Alpine Springs County Water District, Olympic Valley Public Services District, Truckee Sanitary District, South Tahoe Public Utility District, Sierra Lakes County Water District, Town of Truckee, and Placer County Water Agency (Truckee-Tahoe Public Agencies) provided a comment letter to CARB dated August 17, 2022 which detailed why the current Draft Rule will not work for public electric water, and waste water utility fleets that do work in the field (i.e. have extensive PTO) and must stay on the job for days or weeks until work is complete.

The analysis essentially takes the work available from a single tank of fuel for four actual utility Internal Combustion Engine (ICE) trucks and converts that to an equivalent Electric Vehicle (EV) using CARB assumptions and data. The results, as documented in the August 17, 2022 comment letter, are below:

Current ICE Fleet vs. EV Equivalent Comparison:

Vehicle Description	Electric Utility Line Truck	Vactor vacuum pump truck	Service Body	Service Body
Vehicle Class	8	8	5	4
Make/Model	International 7500 SFA 4x4	Freightliner 114SD 6x4	Ford F550 4x4	Chevy 3500 4x4
GVWR [Lbs]	39,000	66,000	19,500	14,000
Current Specifications (ICEV)				
Weight [Lbs]	31,920	40,780	14,330	11,600
Payload [Lbs]	2,500	17,283	2,000	1,200
Energy Storage [kWh]	1,883 (471 useful)	2,636 (659 Useful)	1,506 (377 useful)	1,130 (282 Useful)
ZEV (Battery Electric) Specifications				
Weight [Lbs]	41,065	67,743	22,064	12,800
Payload [Lbs]	-2,065	-1,743	-2,564	-3,093
Energy Storage [kWh]	607	849	486	363
Battery Weight [Lbs]	8,431	11,792	6,750	5,042
Battery Cost [\$]	\$121,400	\$169,800	\$97,200	\$72,600

One concern we identified in this analysis was that the cost of the battery unit was exceedingly expensive. We understand that this cost is implicit to the purchase price of the ZEV and CARB expects this to be offset by reduced maintenance and fuel costs. However; Li-Ion battery packs have a limited lifetime measured in number of charge cycles. We expect that end-of-life battery replacement will not be uncommon in a ZEV fleet for small agencies such as ours since each of our vehicles see heavy utilization (e.g. more charge cycles per day). The chassis and drive trains are expected to outlast the battery lifetime requiring replacement. This significant cost was not accounted for in the Regulatory Impact Assessment.

It is also important to note that in all cases the additional weight from the battery exceeded the GVWR rating for the axels if we maintain existing payload specifications. To accommodate the additional battery weight we must either:

- 1) Retain energy capacity (e.g. length of operating time) and eliminate payload of existing tools & equipment requiring an additional vehicle; or
- 2) Retain payload of existing tools & equipment and significantly reduce energy storage – resulting in a 25% to 65% reduction of operating time.

This demonstrates that, for the Truckee-Tahoe Agencies, current and near future ZEVs are not available as a “one-to-one” replacement of the existing ICE vehicle for such configurations. It is important to note that this analysis does not consider the additional logistics (and equipment purchases) associated with in-field refueling of the ZEV. Nor does it account for cold weather degradation of battery performance. Thus the deficiencies identified by this analysis are likely. A full explanation of the above table with documented sources and calculations can be found in the Truckee-Tahoe Public Agencies August 17, 2022 comment letter to CARB.

- **The Daily Use Exemption should be refined and improved.** We appreciate the inclusion of a daily use exemption. We particularly appreciate how Section

2013.1(b)(3) recognizes how fleet vehicles used to transport people, goods, & materials have fundamentally different operating requirements. As written, sections 2013.1(b)(3) and 2013.1(b)(6) recognize that duty-cycle requirements for fleet vehicles with Power Take-Off (PTO) units cannot be measured using “miles per charge” and must account for the energy needs of the PTO on the work-site.

We note, however, that section 2013.1(b)(6) requires that an agency use a ZEV vehicle to collect the duty-cycle data used to justify a daily use exemption. Agencies should be allowed to collect duty-cycle data from existing ICE fleet vehicles to demonstrate that a one-to-one replacement does not exist in the form of a ZEV. We respectfully direct CARB staff to our previous letter submission (reproduced as an appendix here) in which we presented a matrix and approach by which existing ICE energy capacities and payloads are translated to an equivalent ZEV (Battery EV) using methodologies presented in CARB’s Standard Regulatory Impact Assessment. Such an approach could also be applied as a pathway in Section 2013.1(b)(6) which would prevent agencies from having to purchase a ZEV with only the express purpose of collecting data to show that it does not work. Furthermore, we emphasize that our utility fleet vehicle specifications are derived from the most extreme situations/applications for our vehicles and not the average day-to-day operations focused on in this exemption.

We have previously noted that our community is subject to wildfire safety power outages and extreme winter storms. Our fleet must be able to operate continuously in the field for 24+ hours (without stopping for re-fueling). In meetings with CARB staff, CARB has expressed that agencies can tow diesel generators and charging equipment to facilitate mobile fueling when fleet vehicles must be on-site multiple days with continuous use (i.e. crews rotate in shifts while the vehicle continues to work).

To qualify for the day use exemption, Section 2013.1(b)(5) requires that an agency submit an explanation why a ZEV “...cannot be charged or fueled during the workday at the depot, within one mile of the routes, or where ZEV charging or fueling is available. The explanation must include a description of why charging or fueling could not be managed during driver rest periods or breaks during the workday.” This is also expressed in Section 2013.1(e)(2) where agencies must show documented proof that the “...vehicle or chassis cannot be refueled with compatible mobile fueling options...”. TDPUD is not aware of commercially available mobile DC Fast Charging equipment which would likely require a 500 kW+ generator and charging equipment (transformer, charger, etc.) which would likely require a flatbed truck.

The purchase, maintenance, and management of such mobile equipment represents a significant cost and logistical burden to essential service providers. Logistically speaking, there are some locations in our service territory where a large generator on a trailer simply cannot be physically accommodated – leaving the fleet vehicle potentially stranded

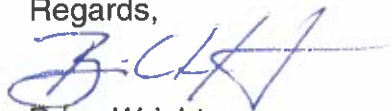
Given the challenges of mobile refueling for our fleet, one solution would be an additional transitional compliance pathway for vehicles which rely on PTOs to execute work. The NZEV pathway offers fleets a transitional compliance path which makes significant progress towards fleet electrification while recognizing that MD/HD ZEV technology is young and still requires substantial research and development before it is ready to address the multitude of real-world applications our electric and water utility fleets serve. However, the NZEV pathway (with its focus on distance traveled by an electric drivetrain) is only useful for fleet vehicles used to transport people, goods, and materials. An electric PTO (ePTO) could afford the same hybrid set-up for fleet vehicles used to perform work via PTO. This could immediately ease compliance while still providing a clear signal to the market regarding the need for clean transportation technologies.

Invitation of Collaborate to Meet Goals of ACF:

The TDPDU appreciates the challenges that CARB faces in implementing the Draft Rule; especially for the electric and water utilities. We continue to support the goals of this effort and have provided extensive comments over the last two years. However, the current Draft Rule has done little to address very serious concerns and deficiencies which are incompatible with our public service obligations. We welcome the opportunity to continue to dialog with CARB staff and to lend our expertise in crafting a final rule that will both meet CARB's obligations while protecting our ability to provide essential services and support public safety/emergency response. We would be happy to come to host a CARB visit, come to Sacramento to meet, or set up a Zoom at your convenience.

Please contact myself or Truckee Donner Public Utility District's Public Information and Strategic Affairs Director Steven Poncelet (stevenponcelet@tdpud.org, 530-582-3951) if we can be of further assistance or to schedule a meeting. Thank you for your consideration and support of public electric and water utilities and the communities that we serve.

Regards,



Brian Wright
General Manager

CC: CARB Board Chair Liane M. Randolph
CARB Board Vice Chair Sandra Berg
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