SMUD®

October 4, 2021

Tony Brasil, Branch Chief
Craig Duehring, Manager
Paul Arneja, Engineer
Mobile Source Control Division
California Air Resources Board
1001 I Street
Sacramento, CA 95812

Re: Sacramento Municipal Utility District's Comments on the September 9, 2021, Advanced Clean Fleets Regulation and Updated Cost Assumptions Workshop

Dear Mr. Brasil, Mr. Duehring, and Mr. Arneja:

SMUD appreciates the opportunity to comment on the Advanced Clean Fleets (ACF) Proposed Draft Regulation Language for Public Fleet Requirements presented at the workshop held on September 9, 2021. We support CARB's continued efforts to engage utility stakeholders throughout this pre-rulemaking process.

SMUD has had an active Electric Transportation Program since 1990 and has been a leader in statewide electric vehicle (EV) policy development since that time. We recognize that transportation is the single largest source of the State's greenhouse gas (GHG) emissions and achieving a zero-emission vehicle (ZEV), truck and bus fleet by 2045 where feasible, is critical to meeting California's environmental goals.

SMUD is taking a proactive approach to electrifying its fleet, including the following actions:

- Ownership and operation of 25 hybrid-electric technology bucket trucks where the bucket is battery operated.
- Operation of 25 all-electric sedans and 25 hybrid sedans.
- Mid-2022 purchase and evaluation of five medium-duty, all-electric trucks (GVW 19,500 lbs.).

Additionally, SMUD is a founding sponsor of the California Mobility Center (CMC). The CMC provides future mobility innovators and industry incumbents with access to programs and resources to fast-track smart and shared mobility solutions and promotes programs and resources that accelerate the pace of fueling and charging

infrastructure and EVs for on and off-highway use, including the policies called for in the ACF regulation.[1]

SMUD supports a comprehensive strategy to accelerate the transition to ZEVs for vehicles that are suitable for electrification. However, we also recognize the unique operational challenges of emergency response and maintaining utility infrastructure in remote areas requiring specialized utility vehicles where electrification may not be an available option.

To accommodate the unique service requirements of electric utilities, we offer the following recommendations on the proposed ACF regulatory language for CARB's consideration:

- Public fleet requirement aligned with the high priority/federal fleet requirement;
- Regulatory methodology that distinguishes between large fleets and small/medium fleets and provides for an Opt-in to the High Priority Fleet rule;
- Purchase requirements based on the contract purchase date;
- Fleet average approach to ZEV implementation;
- Emergency response vehicle exemptions by gross vehicle weight rating (GVWR) where ZEV technology is not yet available;
- Technology Review Committee to assess ZEV availability; and
- Streamlined compliance reporting.

Section 95693.1 Public Fleets ZEV Purchase Requirements

a) The proposed ZEV Purchase Requirements in § 95693.1(a)(1)(A)(1) & (2) may retard the replacement of internal combustion engine (ICE) vehicles.[2]

As written, the Purchase Requirement of 50% ZEVs in 2024 and 100% ZEVs in 2027 will encourage fleet managers to keep older vehicles longer, while waiting for the market to produce viable ZEV replacements. Fleets with special requirements or otherwise unable to meet the Purchase Requirements in the ACF will be incentivized to keep less efficient, older model ICE vehicles for extended periods, even after cleaner, more efficient ICE models become available. Moreover, to ensure the continued reliability of their fleets, managers may also proactively purchase ICE vehicles in anticipation of the upcoming Purchase Requirements and the current scarcity of ZEV alternatives, which would defeat the intent of the ACF regulation.

[1] Home - California Mobility Center (https://californiamobilitycenter.org/).
[2] Section 95693.1(a)(1)(A)(1) "Starting on January 1, 2024, 50 percent of…new motor vehicle purchases…must be ZEVs; and (2) Starting on January 1, 2027, 100 percent of…new motor vehicle purchases…must be ZEVs."

b) CARB should align ZEV implementation in the Public Fleet Requirement to the ZEV requirements in the High Priority/Federal Fleet Requirement.

Fleet Average annual targets for Public Fleets should mirror the targets in Table A: "ZEV Fleet Milestones by Vehicle Body Type and Year" in the proposed ACF High Priority and Federal Fleets Requirements Regulation (shown below).[3] Rather than differentiating between Public and High Priority/Federal Fleets, CARB should consider a regulatory structure that caters to the distinct ZEV implementation challenges of small/medium fleets and large fleets respectively.

Additionally, categorizing vehicles according to "body types" is burdensome and difficult to implement. For example, a 15,000 GVWR truck could be a dump truck, crane, box, flatbed, etc. OEMs build the chassis and upfitters perform modifications based on the customer's specifications. Classification by GVWR is much more practical and reflects an industry-standardized approach that will also provide necessary flexibility for compliance. GVWR correlates to vehicle size, weight, and emissions, which is how fleet managers and OEMs assess commercial vehicles.

Table A: ZEV Fleet Milestones by Vehicle Body Type and Year

Percentage of fleet that must be ZEVs	10%	25%	50%	75%	100%
Group 1: Box trucks or vans, two-axle buses, yard tractor	2025	2028	2031	2033	2035 and beyond
Group 2: Work trucks, day cab tractors, three-axle buses	2027	2030	2033	2036	2039 and beyond
Group 3: Sleeper cab tractors and specialty vehicles	2030	2033	2036	2039	2042 and beyond

c) CARB should implement a regulatory methodology that distinguishes between large fleets and small/medium fleets and includes an opt-in to the High Priority/Federal Fleet Requirements.

We recommend that the ACF Public Fleet Requirements include a methodology that distinguishes between small/medium fleets and large fleets, and that the ACF allow public fleets to opt into the High Priority/Federal Fleet Requirements. Entities with small and medium fleets face unique operational challenges. A one-size-fits-all Public Fleet Requirement Regulation is not viable for small/medium fleets that simply do not have the resources, fleet turnover rate, acquisition requirements, operational

[3] Table A: "ZEV Fleet Milestones by Vehicle Body Type and Year" in the proposed ACF High Priority and Federal Fleets Requirements Regulation (https://ww2.arb.ca.gov/sites/default/files/2021-08/210909acfdraft_highpriofed_ADA.pdf).

flexibility, or purchasing power of larger fleets. Stranding assets is an especially expensive proposition for small/medium fleets, and small/medium fleets will require more time than large fleets to transition to ZEVs. An alternative compliance pathway and extended compliance timeline for small/medium fleets within the Public Fleet Requirements may provide the necessary flexibility and regulatory relief.

Additionally, to afford the needed flexibility in this rule, we recommend allowing fleets subject to the Public Fleet Requirements to be able to opt into the High Priority/Federal Fleet Requirements if entities elect to do so. The proposed Public Fleet Purchase Requirements of 75% ZEVs may not be attainable for small/medium public fleets that maintain only a limited quantity of specialty vehicles. Small/medium public fleets may mobilize 100% of their fleet in extreme emergencies, and these fleets may be severely hindered in their ability to respond to crises by the proposed 25%/75% exemption ratio.

The ACF Regulations should adopt approaches shown to be successful in existing CARB regulations that already recognize the unique constraints and challenges of smaller fleets. Regulations like CARB's LSI include provisions to accommodate the exceptional lifecycle and resource requirements smaller fleets must contend with.[4]

d) ZEV Purchase Requirements in § 95693.1 should be based on the contract purchase date.

ZEV Purchase Requirements should be based on the year of purchase identified on the executed ZEV purchase contract or other evidence of purchase ("purchase commitment"), rather than the vehicle model year or vehicle delivery date. Currently, the expected fulfillment timelines for bucket trucks and specialty vehicles outfitted to meet utility specifications is over 600 days from date of purchase to date of delivery; and standard chassis are closed to orders "until further notice" through 2022.[5] The fleet owner has no ability to control vehicle availability or delivery timelines and would be unable to achieve compliance certainty. Using the purchase commitment date to meet the Purchase Requirements will mitigate any ZEV unavailability and delivery delays that are beyond the fleet owner's control.

Additionally, many public agencies face budget restrictions that cannot simply be waived by approval from the agency's governing body. Consideration of the purchase commitment date will allow fleet owners to manage their budgets and expenditures and help ensure that requirements are met within capital and operational budget constraints, and that procurement caps on expenditures are not exceeded in any given year.

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[4] Large-Spark Ignition Regulation exemptions (http://ww2.arb.ca.gov/sites/default/files/offroadzone/landing/lsi.html#:~:text=The%20Regulation%20does%20not%20apply,use%20greater%20than%2050%25).

[5] Delayed availability of standard chassis orders through 2022 is based on SMUD Fleet staff discussions with OEMs.

e) CARB should consider a Fleet Average approach to ZEV implementation.

We recommend that CARB consider a ZEV implementation methodology similar to existing CARB regulatory structures that allow for more organic ICE to ZEV replacements. A Fleet Average approach--like CARB's In-Use Off-Road Diesel-Fueled Fleets Regulation or "Off-Road Regulation"—will enable fleet owners the flexibility to decide how best to manage their fleets, based on community requirements and available technologies, to meet California's ZEV targets.[6] For example, the Off-Road Regulation grades or ranks engines by tiers 0-4 based on vehicle emissions labels (zero being least efficient and 4 being very clean). Fleet managers can then decide which vehicles to electrify to meet an annual target set by CARB.

The Fleet Average approach has been implemented in existing regulations and contributes to California's vehicle emission reductions goals. The following are examples of current CARB regulations that employ the Fleet Average methodology:

1) In-Use Off-Road Diesel-Fueled Fleets Regulation (DOORS).[7]
2) Large Spark-Ignition (LSI) Engine Fleet Requirements Regulation.[8]
3) Portable Equipment Registration Program (PERP).[9]

SMUD averages 12 to 15 years for total fleet turnover. Our average fleet age is approximately 10 years old. A Fleet Average approach will allow fleet owners like SMUD to replace their dirtiest, least efficient vehicles earlier and faster, while avoiding the wasteful expense of stranding assets that have not yet reached the end of their useful life. For example, an entity may opt to electrify 2 or 3 medium-duty vehicles and retain 1 heavy-duty ICE vehicle when comparable ZEV technology is unavailable. A Fleet Average approach will allow entities to acquire ZEVs whenever possible while making progress towards emission reduction goals based on ZEV market availability, which will be equally effective in achieving the objectives of the ACF rule.

[6] CARB In-Use Off-Road Diesel-Fueled Fleets Regulation applies to all self-propelled off-road diesel vehicles 25 hp or greater and most two-engine vehicles (https://ww2.arb.ca.gov/our-work/programs/use-road-diesel-fueled-fleets-regulation).
[7] CARB In-Use Off-Road Diesel-Fueled Fleets Regulation applies to all self-propelled off-road diesel vehicles 25 hp or greater and most two-engine vehicles (https://ww2.arb.ca.gov/our-work/programs/use-road-diesel-fueled-fleets-regulation).
[8] CARB LSI Engine Fleet Requirements Regulation applies to operators of forklifts, sweepers/scrubbers, industrial tow tractors, and airport ground support equipment (https://ww2.arb.ca.gov/our-work/programs/use-road-diesel-fueled-fleets-regulation).
[9] CARB PERP Regulation includes portable engines and other types of equipment.

Section 95693.2 Public Fleet Exemptions

a) The proposed Public Fleet Exemptions ratio in § 95693.2(a)(1) are operationally impractical and not feasible to implement.[10]

The condition that exemptions from the ZEV (or NZEV) Purchase Requirements for vehicles that provide emergency response in support of electricity services may be granted if "more than 75 percent of that body type in the fleet are already ZEVs" is impractical. In many cases, one hundred percent of certain vehicle body types in a utility's fleet (such as line trucks, aerial bucket trucks, and foreman trucks, etc.) are critical for emergency response. This is particularly true in large scale events such as wildfire, storm, and other widespread outage situations. The percentage of vehicle body types that may respond in any given emergency or mutual aid situation varies—a 25%/75% exemption ratio is unrealistic and does not reflect real-life conditions in the field. Exemptions should be flexible enough not to constrain a public agency's ability to respond to catastrophic or emergency situations when necessary.

b) Exemptions should be applicable to emergency response vehicles by GVWR to include heavy-duty utility vehicles that support essential public services where ZEV technology is not yet available.

SMUD urges CARB to apply a ZEV exemption to emergency response vehicles according to GVWR where no ZEV is available, or where a ZEV or NZEV has not been found to meet fleet needs. Exemptions would allow utilities to continue to operate ICE vehicles in the interim and would include a "duration" clause with a bound on the exemption requiring periodic re-evaluation to accommodate evolving technology. Framing exemptions for emergency response vehicles may also include specific criteria such as vehicle class/GVWR or duty-cycle, etc.

To ensure the resiliency of critical utility services, utility vehicles needed to support essential public services must operate under exceptional duty-cycles and in extreme conditions. This occurs, for example, in storm situations (either heat, cold, wind or rain) and where multiple consecutive outages across the service territory may occur. In emergency situations our crews regularly work 24/7 shifts, and our trucks must serve as safe shelter from the elements. Additionally, utility emergency vehicles may travel for consecutive shifts over multiple days, sometimes accessing remote and often unpopulated areas. SMUD also provides assistance to support emergency power restoration. In mutual aid emergencies, our crews must travel far beyond SMUD's service territory to provide mutual aid in emergencies where charging capabilities are unknown. For example, in the past three years, SMUD crews have provided mutual aid in Puerto Rico hurricane recovery, the Redding Fire, and Light Up the Navajo Nation effort in Arizona.

[10] Section 95693.2(a)(1) wherein exemption from ZEV or NZEV purchase requirement may be granted if "more than 75 percent of that body type in the fleet are already ZEVs."

A full complement of utility vehicles, including aerial equipment, derricks, dump trucks, crew trucks, and line trucks, need to be able to run for the duration of each job, however extended, remote, or distant the job may be. The operations of some of these vehicles require reliable power for lifting buckets, pumping water, etc. Stopping, even intermittently, to charge any of these vehicles may pose safety and productivity risk or may simply be impossible.

c) A Technology Review Committee should be implemented for Commercialization Determinations to assess ZEV availability and suitability, performance, and reliability risk for utility specialty vehicles.

SMUD recommends that the ACF include a technology review conducted by an independent panel of experts to help address the risk that vehicles currently do not exist for some critical specialty use vehicles. The Technology Review Committee ("Committee") would make commercialization determinations for truck classes according to GVWR. The commercialization determination may include a comprehensive market analysis that a viable ZEV exists in the marketplace, and that the ZEV is demonstrated, evaluated, and determined to support or satisfy the necessary performance requirements of the existing ICE vehicle to be replaced. Determinations by the Committee should align with the ACT Rule and inform the timeline and sales requirements in the ACF, as needed.

Many of the vehicles that utilities depend upon to provide critical services are considered specialty vehicles and may be some of the last vehicles adapted to zero emission drivetrains given the limited market size and difficult performance requirements. While technology in the ZEV truck market is rapidly evolving, there are still significant gaps between the ability of specialized ZEV trucks to meet certain duty cycles and auxiliary functions required in the field and in emergency response situations. These unknowns introduce significant operational and compliance risk for fleets.

SMUD recommends that CARB develop a biennial technology review that assesses the status of ZEV technology and adjusts the regulatory compliance targets based on data and consensus from those reviews. CARB adopted a similar biennial technology review approach process in the light-duty ZEV mandate that proved to be a fundamental part of that rule's success.[11] A similar approach could be applied to the ACF to help address the financial and technical risk for entities that will need to make significant investments in transitioning their fleets.

Section 95693.3 Public Fleets Reporting

Streamline compliance reporting.

[11] CARB held technology symposiums in 2006 and 2009 and an independent expert review panel submitted a report on the status of ZEV technology. The independent panel should include representatives from across the industry including fleets, utilities, EVSPs, OEMs, agencies, including the Energy Commission on infrastructure, etc.

SMUD recommends eliminating any potential requirements that public fleets file periodic reports in addition to the required annual compliance reporting.

SMUD fully supports the annual public fleet compliance reporting requirement proposed by CARB, to be submitted every March 1st. However, intermittent submittals or "within 30 days of adding vehicles to the fleet" are needless, repetitive, and overly burdensome.[12]

Several of SMUD's vehicles and aerials are custom-built to meet SMUD's unique needs. Procurement and delivery of these vehicles may occur several times throughout the year and are subject to unforeseen delays that are beyond our control such as manufacturer material shortages, staffing constraints, shipping interruptions, etc. On any given year, the "30 day" reporting requirement could entail multiple report submittals, which is disruptive to operations.

We recommend that any mid-year fleet vehicle additions or mid-year fleet activities be incorporated into the annual compliance reporting that is due on March 1st of each year.

Conclusion

The Advanced Clean Fleets is an innovative regulatory effort. This comprehensive regulatory strategy to ensure that the cleanest fleet vehicles are deployed in California to meet transportation needs is ground-breaking and SMUD enthusiastically supports its success.

While the initial focus of the Advanced Clean Fleets should be on high-priority fleets with vehicles that are suitable for early electrification, a one-size-fits-all approach could be detrimental to dependable, long-term transportation electrification.

SMUD appreciates the opportunity to comment on the Advanced Clean Fleets (ACF) Proposed Draft Regulation Language for Public Fleet Requirements. SMUD also supports the recommendations by the California Electric Transportation Coalition (CalETC) in their comments on this rulemaking, dated October 4, 2021. We look forward to the ongoing dialogue with CARB as we strive together to formulate solutions to enhance the positive impacts of EV adoption.

[12] CARB Staff ACF Presentation Slides – Public Fleet Reporting Slide #29 – September 9, 2021 (https://ww2.arb.ca.gov/sites/default/files/2021-09/210909acfpres_ADA.pdf).

/s/_____
MARTHA HELAK, Government Affairs Representative
Sacramento Municipal Utility District MS B406

/s/_____
JOY MASTACHE, Senior Attorney
Sacramento Municipal Utility District MS B406

cc: Corporate Files (LEG 2021-0122)