

September 27, 2021

To: California Air Resources Board

RE: Proposed Advanced Clean Fleets Regulation

To whom it may concern,

On behalf of the City of San Diego, thank you for allowing us the opportunity to provide written responses to the proposed Advanced Clean Fleets Regulations for Public Fleets that was discussed in detail on September 9, 2021. The City supports clean air regulations and has been a leader in the State in achieving Climate Action. However, there are several items that we are seeking clarity on or have concerns with the aggressive timelines in relation to funding availability and vehicle availability in the market, to implement the proposed regulations.

The City of San Diego has proudly led on climate action regionally, nationally, and internationally for several years. This was emphasized by the adoption of its 2015 Climate Action Plan which committed to reducing its GHG emissions 50% from a 2010 baseline no later than 2035. The Plan includes commitments to shifting to 100% renewable electricity citywide, adopting policies to enable a 50% shift in mode share for commuter trips, and significantly improving the energy and water efficiency of our built environment. The City is currently updating the Climate Action Plan to update these targets and actions, including a new overarching goal to reach zero net emissions well ahead of the IPCC Paris 2050 deadline. San Diego is proud to lead by example by developing a Municipal Energy Strategy and Implementation Plan to move all city facilities to zero emissions no later than 2035. This strategy also recognizes that the transition from liquid to electric fuel for vehicles requires the city to account for not just building energy but also the reliance on these electrical systems to support charging infrastructure for fleets, city workers, and the public visiting city buildings, and understanding the scope and scale of electrical system upgrades to support these needs is a critical component of our municipal energy strategic planning.

*ITEM #1 – Regulation lacks mention of grid stability and electricity system redundancy to support emergency situations.*

*The City of San Diego has been presented with several emergency situations over the past decade, including the 2003 Cedar Fire and 2007 Wildfires. Fires are a constant threat to our City and over the past several decades the City has taken aggressive action on curbing the threat to our residents. Providing essential services to our residents during and after these wildfire situations is crucial. Having electrical systems and storage facilities in place to support an electrified fleet for emergency vehicles, water and sewer utility vehicles, transportation vehicles, etc. is critically important in fleet conversion planning, funding identification, and vehicle procurement. The current regulations need to factor in the time, funding and collaboration with utility companies needed to install not just the grid-tied charging infrastructure but the additional electrical storage necessary to maintain contingency operations in the event of a grid failure, whether from wildfire, earthquake, physical or cyberattack, or other disaster event.*

**ITEM#2** – Availability of models/body types (of multiple weight classes and functions) are not confirmed by Fleets, but rather by manufacturers telling CARB that models “will” be available.

The City has concerns over the availability of vehicles and equipment that will satisfy operational needs. As an example, the City provides trash services for single family homes and has a fleet of over 150 CNG trash trucks, and will have over 200 in the fleet when these proposed regulations are enacted. Our trash trucks make upwards of two and three trips to a landfill daily, and on certain days are driving 180+ miles to perform trash services. We operate these trucks between 8 and 12 hours per day. We are unaware of a manufacturer that has a ZEV product that can satisfy our operational conditions and needs. In addition to the current lack of ZEV products in the market, the work hours and distances mean any heavy-duty EV charging infrastructure would need to meet or exceed the current charging times of commercially available DC fast charging (DCFC) stations in the light-duty vehicle market – increasing costs and technical risk to fleet operations for heavy-duty vehicles. This situation also exists for a host of other essential vehicles including sweepers, utility service vehicles, dump trucks, and other larger vehicles.

**ITEM#3** – Cost assumptions provided are grossly misinformed and underestimated. The use of news articles from “Bloomberg” to estimate future costs of stationary and vehicle batteries, as opposed to expert technical analyses, are insufficient and do not provide for an accurate forecasting model.

The City has concerns regarding the cost proposals provided by CARB staff. Based on recent experience installing charging infrastructure, the costs to install all necessary components of a new charging (i.e. fueling) infrastructure – including real estate purchase for new charging locations and expansion of maintenance facilities – are significantly higher than the estimates that CARB staff was utilizing. Even under such circumstances where the CARB staff projections regarding battery prices are correct, the costs for installing new electrical infrastructure are well-established and historically more likely to rise than fall. Any overall conversion cost projections that do not take this into account exclude a well-known and significant variable, leading to substantial underestimation of the financial assistance fleet operators will need to meet these requirements. Cost estimates need to factor in acquisition of new land, installation of upgraded electrical services for outdated infrastructure and service yards, and installation of back-up power supply that needs to accommodate charging infrastructure to support emergency situations when the grid may be off-line to be considered accurate and complete.

**ITEM#4** – Timelines for Public Fleets are not taking into account public budget and funding methods for capital projects and need extension to minimum of 4 years from regulation adoption. Timelines for Public Fleets are not taking into account the available electrical infrastructure at service yards and need to collaborate with utility companies for the build out of infrastructure to deliver the necessary amount of needed power.

The City operates over 4,500 vehicles that are scattered throughout the City. We purchase approximately 600 vehicles per year, meaning that in 2024 approximately 300 of the vehicles that we will be ordering will be EV under this proposed regulation and that the City will need to have charging infrastructure in place to support these new ZEV vehicles. The City has three main service yards where large percentages of our fleet are parked overnight. As a secure parking lot needs little in the way of cutting-edge infrastructure, there has been little need to invest heavily in all but the onsite maintenance facilities since the yards were developed in the 1960s. Electrifying these yards to support an electrified fleet is a much greater undertaking than a simple electricity panel upgrade or some quick trenching in the parking lot. The time and costs for planning, engineering, and expansion of not

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just the electrical capacity of the system at the facilities, but also the distribution system that feeds it are well beyond the available budget of the city. While savings will eventually manifest from retiring or repurposing assets oriented to internal-combustion vehicles, they will have no effect on the upfront capital expenses. The City's capital improvement budgeting timelines are on a 5-year cycle and cannot easily be repurposed at the scale this regulation would require. Redirecting the necessary funds to meet the timing requirements could halt or delay projects needed for the safety and security of residents and are likely to create additional costs due to contract amendments or terminations that would need to be restarted later – wiping out the near-term value of any operational savings from shifting to an electric fleet on the timeline presented in the regulation.

**ITEM#5** – Regulation does not identify any available funding opportunities that are equitable to the size of an agencies fleet, vehicle types or infrastructure needs, and are distributed unfairly or on-demand only with inadequate timeframes to apply. (HVIP, CALeVIP, various grants etc.)

The City, like many cities, does not have the funding in place to support the charging infrastructure projects that will be required to support an electrified fleet and the additional costs associated with purchasing a ZEV vs. a non-ZEV of comparable size and function. ZEV projects are competing for general fund revenue that is utilized to support emergency and essential operations including fire and police services, trash collection, parks, libraries and other services. Funding needs to be identified and programmed to support ZEV infrastructure – including battery storage for emergency situations when the grid is off-line – at facilities that are not directly 'public-facing' but support public-facing services such as trash trucks, water utility vehicles, street sweepers, etc.

Upfront funding also needs to be identified for the cost increases related to ZEV's. Although costs for ZEVs in the sedan and light pickup categories are slightly more expensive vs. fossil fueled vehicles, costs for larger vehicles including sweepers, dump trucks, trash trucks, utility service vehicles, etc. are upwards of 100% more vs. a comparable non-ZEV. The City currently has a large array of vehicles and equipment, and sedans and light pickups represent a small portion of the overall City fleet. The exclusion of emergency vehicles in this regulation means that a large majority of City vehicles affected by the 50% purchasing requirement will be heavy-duty vehicles which will require a significant increase in upfront funding that has not been planned and budgeted for..

**ITEM#6** – Drafted exemptions for public fleet emergency response situations are conditional upon additionally restrictive criteria that is not attainable.

1. 75% of a body type are already ZEV
2. Demonstration of lack of infrastructure (which includes mention of mobile fueling options)(to our knowledge mobile fueling options are still in concept stages of development)

This is a very difficult threshold for the City considering that we currently have approximately 4,500 vehicles and equipment in our fleet. We continue to have concerns about ZEV availability for vehicles that provide essential services, and the need for back-up power when the grid is off-line to support essential services. The City has a host of large, heavy duty vehicles that support essential City services related to water, sewer, transportation, stormwater, fire, PD, etc. and meeting the 75% threshold is unattainable. The City is also large geographically meaning that charging and back-up power infrastructure will need to be installed at multiple locations to support essential services. Further, this exemption does not take into consideration vehicles that support essential City services like water, sewer, transportation and stormwater. These services during emergencies are essential and vehicles supporting essential services should be considered under the exemption.

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*ITEM#7 – Regulation does not give any extensions/ accommodations/credit for fleets that have converted their fleets to RNG, CNG or other alternative fuels, have replaced conventional diesel with bio or renewable diesel.*

*The City has invested in Compressed Natural Gas (CNG) infrastructure and purchased hundreds of CNG vehicles. The City has also invested and converted to renewable and bio-diesel for nearly all of the City's fleet. Not receiving credit or accommodations for these projects is disappointing considering that we were doing so with the understanding that these types of investments would have a longer service life, which is needed to balance the return on investment and debt that was issued for these investments.*

Again, thank you for allowing us the opportunity to provide written responses to the proposed Advanced Clean Fleets Regulations for Public Fleets that was discussed in detail on September 9, 2021.

Sincerely,



Casey Smith  
Director  
Department of General Services