CALCIMA
California Construction and Industrial Materials Association

April 7, 2023

Clerk of Board
California Air Resources Board
1001 I Street
Sacramento, CA 95814
arbboard@arb.ca.gov

Re: CalCIMA comments – California Air Resources Board Proposed 15-day Changes to the Proposed Regulation Order Advanced Clean Fleets Regulation

CalCIMA appreciates the opportunity to provide comment regarding California Air Resources Board's (CARB) proposed 'Advanced Clean Fleets (ACF)' regulation.

CalCIMA is the statewide voice of the construction and industrial materials industry. With over 500 local plants and facilities throughout the state, producing aggregate, concrete, cement, asphalt, industrial minerals, and precast construction products, our members produce the materials that build our state's infrastructure, including housing, public roads, rail, and water projects; schools and hospitals; assist in growing crops and feeding livestock; and play a key role in manufacturing consumer products including roofing, paint, low-energy light bulbs, and battery technology for electric cars and windmills. The continued availability of our members' materials is vital to California's economy, as well as ensuring California meets its renewable energy, affordable housing, and infrastructure goals.

CalCIMA has expressed concerns and provided feedback for CARB staff throughout the proposed ACF regulation rulemaking process: Prior to the October 27, 2022 CARB Governing Board meeting and continuing through the current 15-day review. Although CalCIMA has appreciated the opportunities to communicate with CARB staff regarding the proposed ACF regulation, there continue to be several unresolved concerns, many of which are detailed in this letter. CalCIMA concerns presented in our comment letter submitted on October 17, 2022 (attached to this letter for reference) have not yet been addressed. And, of the concerns that CARB staff have responded to, several responses have lacked specificity or were inconclusive. The lack of meaningful responses to our concerns creates apprehension related to the participatory and inclusive processes between the regulated community, regulators, and other stakeholders that lead to the correction of deficiencies. Additionally, it makes the stakeholder engagement experience of this regulation received as negligible, and makes CalCIMA's goal to submit comments for meaningful consideration and discussion with CARB staff unattainable. Furthermore, the California Administrative Procedure Act, Section 11346.8(a) of the Government Code states that "the state agency shall consider all relevant matter presented to it before adopting, amending, or repealing any regulation."

CalCIMA understands that environmental rules and regulation protect the air, water, and habitat that make California a healthy and beautiful place to live; however, it needs to be done in a manner that provides a reasonable path to compliance for businesses. There are sections of the current proposed ACF regulation that will be unachievable for fleets to comply with for reasons that are beyond their control. Accordingly, we request the following:

1) **Establishment of a fleet advisory group by CARB** immediately following approval of the proposed ACF regulation. Its purpose will be to document communication between CARB and the regulated fleets. The group will provide an avenue for fleets to disclose issues related to implementation of the regulation which will in turn further educate CARB staff regarding the constraints and challenges of complying with the regulation and will potentially allow CARB staff to consider potential adjustments that may be necessary for successful implementation of the regulation; and

2) **Establish a date to review the regulation with CARB's Governing Board** to provide a general status update regarding the regulation meeting its projected targets, compliance issues, and proposed adjustments to the regulation that may resolve or minimize compliance issues.

The following table contains CalCIMA's highest priority comments regarding the 'Proposed 15-day Changes to the Proposed Regulation Order Advanced Clean Fleets Regulation – High Priority and Federal Fleets Requirements'.

Issue	**Purpose and Proposed solution / Requests for CARB**
1) Add "available to purchase and/or commercially available" definition	**Purpose:** To guide CARB staff in its ability to determine whether granting a ZEV availability exemption is or is not warranted by providing criteria and standards. These definitions will provide criteria for CARB staff to utilize in determining whether a particular ZEV satisfies the operational criteria and specifications of the vehicle it is intended to replace, and whether it is available for purchase on commercially reasonable terms inclusive of production capacity, and abilities to deliver and service the vehicle within reasonable timeframes. **Proposed rule language:** "Available to purchase and/or commercially available" means a vehicle that comes in the configuration required to perform the work or necessary services the fleet owner achieves with the existing ICEV it is intended to replace that is not a low-volume manufacturer as described by 49 USC § 30114(b)(7), that is able to deliver the vehicle within six months of an order, and has the ability to provide timely mechanical service to the vehicle throughout the state. Such a vehicle shall meet each of the following criteria: 1) the vehicle cost does not exceed 1.5 times that of a new vehicle it is intended to replace; 2) the vehicle fulfills the duty cycle and work needs of the vehicle it is intended to replace without requiring the purchase of additional vehicles or equipment; and 3) the vehicle complies with the requirements of 13 CCR section 1956.8 and 17 CCR section 95663 as amended by the Zero-Emission Powertrain Certification regulation.
2) Add a definition for the term "complete vehicle"	

	Purpose: To support CARB's ability to make a determination as to whether granting a ZEV availability exemption is or is not warranted by addressing availability of technology and model options. This will potentially avoid environmental impacts associated with replacement ZEVs of different configurations. For example, if zero-emission haul trucks or ready-mix concrete trucks provide substantially lower capacity, fleets will be required to maintain a significantly larger fleet. This could prove to be infeasible for space and infrastructure reasons, and lead to additional impacts such as increased brake wear, tire and road wear, clutch wear, and road dust resuspension (increasing the number of vehicles on the road will increase PM emissions from these sources to nearby receptors). Accordingly, CalCIMA recommends inclusion of the definition "complete vehicle" from 40 CFR § 1037.801 as proposed below. **Proposed rule language:** A "complete vehicle" is defined as functioning vehicle that has the primary load carrying device or container (or equivalent equipment) attached. Examples of equivalent equipment would include fifth wheel trailer hitches, firefighting equipment, and utility booms.
3) Modify the definition of "configuration"	**Purpose:** To support CARB's ability to make determinations of whether granting a ZEV availability exemption related to vehicle functional equivalence is or is not warranted. This determination will require taking into account all relevant vehicle characteristics to prevent creation of a mandate to purchase deficient equipment, and to ensure uniform implementation of the regulation. **Proposed rule language:** "Configuration" means a unique combination of basic vehicle inertia weight, axle ratio and spacing, cargo body type, payload capacity as applicable, and is designed to achieve a specified performance output. Examples of configurations include such commonly understood terms as bucket trucks, box trucks, concrete pump trucks, concrete mixer trucks, bulk pneumatic trucks, dump trucks, digger derricks, drill rigs, stake bed trucks, flatbed trucks, and tow trucks. Vehicles of the same configuration can generally perform equivalent work. ~~The configuration does not include any auxiliary equipment or secondary uses of equipment added to or carried on the vehicle body. Such equipment may include such commonly understood terms as welding equipment, lift gates, portable tanks, generators, storage cabinets, and winches~~. (P. A-2-7)
4) Add an alternative pathway for the direct transition to hydrogen fuel cell vehicles	**Purpose:** For those fleets for which a direct transition to hydrogen fuel cell vehicles is the logical operational endpoint, a requirement to purchase battery electric vehicles to achieve short-term compliance will force a double investment. Allowing such fleets to transition directly to hydrogen fuel cells would eliminate significant economic impacts from operating dual-powered fleets and maintaining two fueling infrastructures at a single facility. **Request for CARB:** Add alternative pathway for fleets to transition directly to hydrogen fuel cell vehicles.

5) Modify the definite of "Specialty vehicle" to clarify inclusion of ready-mix concrete trucks	**Purpose:** To clarify ready mix concrete trucks are classified as "specialty vehicles" since rulemaking documents leading up to this comment letter intermittently categorize these trucks as either "specialty vehicles" or as "work trucks." However, ready ready-mix concrete trucks are not work trucks, as the vehicles' heavy front axle place them solidly within the specialty vehicle definition. Additionally, there are applications of specialty trucks that are under 33,000 lb. GVWR that should not be precluded from the "specialty vehicle" definition. **Proposed rule language:** "Specialty vehicle" means one of the following: (A) A vehicle with a GVWR greater than 33,000 lb. and with a heavy front axle <u>examples include ready-mix concrete trucks)</u>; or (B) A vehicle ~~with a GVWR greater than 33,000 lb.~~ <u>of any weight</u> that is not designed to carry cargo and is configured to perform <u>off-road or jobsite specific</u> work ~~that can only be done while the vehicle is stationary~~ and the auxiliary mechanism to perform that work is an integral part of the vehicle design. Examples include vehicles commonly known as vacuum trucks, digger derricks, and concrete pump trucks. <u>Examples also include mechanic trucks, asphalt spreader trucks, fuel and lube trucks, and other trucks as determined by CARB</u> (P. A-2-11)
6) Modify Daily Usage Exemption	**Purpose:** To resolve the following issues with the current rule language: a. The requirement for at least ten percent of a fleet to be ZEVs may be unattainable during at the outset of the regulation and places an unfair cost burden on fleets that have greater daily mileage; b. The exemption requires substantiated data collected from other ZEVs in the same fleet that may be unattainable during the onset of the regulation; c. No rational basis exists to identify the lowest mileage to energy use reading for each day and exclude the 3 highest readings; and d. Overly burdensome requirements to achieve validated 'Daily Usage' exemption for vehicles. **Proposed rule language:** (b) Daily Usage Exemption. <u>If no new BEV that can meet the demonstrated daily usage needs of an existing vehicles of the same configuration in the fleet, is available for purchase as determined by the criteria specified in section 2015.3(b)(2) through (5), f</u>leet owners may request an exemption as specified in sections 2015.1(c)(2) and 2015.2(f)(2) to purchase a new ICE vehicle of the same configuration as ~~an~~ <u>the existing</u> ICE vehicle being replaced as specified in section 2015.3(b)(1) ~~if no new BEV is available to purchase that can meet the demonstrated daily usage needs of any existing vehicles of the same configuration in the fleet, as determined by the criteria specified in section 2015.3(b)(2) through (5)~~. If approved, fleet owners must place ~~their new ICE vehicle~~ orders <u>to purchase the exempt vehicles</u> within 180 calendar days <u>of exemption approval</u>, and government fleet owners must place <u>orders for</u> their new ICE vehicle orders within 1 year, from the date the exemption is granted. ~~Fleet owners may request their exemption only if at least ten percent of their California fleet is comprised of ZEVs or NZEVs.~~ The Executive Officer will not approve exemption requests for a vehicle configuration that is available to purchase as: an NZEV an FCEV; a Class 2b or 3 BEV with a rated

	energy capacity of at least 150 kilowatt-hours; a Class 7 or 8 BEV tractor or BEV 3-axle bus with a related energy capacity of at least 1,000 kilowatt-hours; a Class 4 through 6 BEV with a related energy capacity of at least 325 kilowatt-hours; or a Class 7 or 8 BEV that is not a tractor or 3-axle bus with a rated energy capacity of at least 450 kilowatt-hours and is commercially available. The fleet owner must submit the following information by email to TRUCRS@arb.ca.gov to apply: (1) Submit the make, model, weight class, configuration, and photograph of the ICE vehicle to be replaced. (2) Identify the BEV that is available to purchase in the same weight class and configuration with the highest rated capacity available. Submit the make, model, weight class, configuration as determined on the CARB Advanced Clean Fleets webpage as commercially available, and rated energy capacity of the identified BEV. (3) Calculate the range of the vehicle identified in section 2015.3(b)(2) in miles by dividing the rated energy capacity of the identified BEV by the following factors: for Class 2b through 3 vehicles, 0.6 kilowatt-hours per mile; for Class 4 through 6 vehicles, 1.3 kilowatt-hours per mile; for Class 7 and 8 vehicles that are not tractors, 1.8 kilowatt-hours per mile; for Class 7 and 8 tractors, 2.1 kilowatt-hours per mile. For vehicles that operate truck mounted or integrated equipment while stationary, in lieu of calculating the needed rated energy capacity based on vehicle miles travelled, the needed rated energy capacity is the same as measured BEV energy use section 2015.3(b)(3)(A). Submit the calculation and results. (A) In lieu of calculating range as specified in section 2015.3(b)(3) fleet owners may instead submit measured BEV energy use data from BEVs of the same configuration already operated on similar daily assignments to substantiate their exemption request. Information ~~must~~ can include vehicle loading and weight data, route grade, and average ambient daily temperature, vehicle miles travelled per day, energy used to drive, ~~and state of charge at the beginning and end of the daily shift to show typical daily energy usage for the BEV, over five consecutive business days.~~ For vehicles that operate truck mounted or integrated equipment while stationary the information must also include the energy used while stationary and number of hours such truck mounted or integrated equipment is operated each day. Fleet owners may also submit documentation from ZEV manufacturer data collected from ZEVs in actual service to substantiate the claim. Vehicles that lack stable routes, service rural routes without charging infrastructure, or require the capacity to do work at remote locations after travel may submit evidence of this when seeking this exemption. (4) Submit a daily usage report for a period of at least 30 consecutive workdays from within the last 12 months using telemetry data or other data collection system that tracks daily mileage and energy use, and hours of vehicle operation if applicable, for all ICE vehicles of the same weight class and configuration of the vehicle to be replaced. Fleet owners that have a mutual aid agreement to send vehicles to assist other entities during a declared emergency event may alternatively submit this

	report from within the last 60 months. The report must include the daily miles traveled and energy used to drive for each ICE vehicle of the same weight class and configuration of the vehicle to be replaced. ~~Identify the lowest mileage or energy use reading for each day and exclude the 3 highest readings.~~ For the exemption to be granted, the highest remaining mileage or energy use number must be greater than either the range calculated in 2015.3(b)(3) or the energy use data submitted per section 2015.3(b)(3)(A). (A) For vehicles that operate truck mounted or integrated equipment while stationary, the daily usage report must include the energy used while stationery and number of hours such truck mounted or integrated equipment is operated each day, for at least 30 consecutive workdays from within the last 12 months. (5) Submit a description of the daily assignments or routes used by existing vehicles configurations with an explanation of why all BEVs available to purchase of the same weight class and configuration cannot be charged of fueled during the workday at the depot, within one mile of the routes, or where ZEV fueling infrastructure is available. The explanation must include a description of why charging could not be managed during driver rest periods or breaks during the workday <u>without incurring additional labor costs and delays, or resulting in material damage and spoilage</u>. (6) In granting or denying the exemption request, the Executive Officer will rely on the information submitted by the applicant and utilize their good engineering judgement to determine whether the information meets the criteria specified in section 2015.3(b). (P. A-2-36 to A-2-37) **Request for CARB:** Modify the 'Daily Usage Exemption' to be less burdensome to comply with, particularly for vehicles that will not have ZEV option for multiple years.
7) Modify Infrastructure Delay Exemption	**Purpose:** To allow fleets an appropriate exemption time for circumstances outside their control related to obtaining a construction permit due to delays that may occur by the entity processing the construction permit. **Proposed rule language:** (B) Documentation showing the delay is a result of any of the following circumstances that occurred after the fleet owner ~~obtained~~ <u>applied for</u> the construction permit identified in section 2015.3(c)(1)(A): change of general contractor; delay in manufacturer and shipment of ZEV fueling infrastructure equipment; delays obtaining power from a utility; delays due to unexpected safety issues on the project; discovery of archeological, historical, or tribal cultural resources described in the California Environmental Quality Act, Public Resources Code Division 13, Section 21000 et. seq.; or natural disasters. (P. A-2-38)

8) Add appeal process pursuant to compliance exemptions	**Purpose:** To serve as an oversight or correction mechanism to deliver consistent application of rule. **Request for CARB:** Add an appeal process pursuant to compliance exemptions.
9) Provide compliance pathway for use of RNG for specialty and/or weight sensitive applications that will not have a ZEV option in the short- or medium-term	**Purpose:** To discourage use of diesel fuel in lieu of use of renewable natural gas (RNG) fuel in vehicle configurations where ZEVs are not available in the short- or medium-term by providing a compliance pathway that gives the certainty needed for investment and continued investment in RNG as a bridge technology. It should be noted that use of RNG in varying applications of trucks supports SB 1383's goal to direct organic waste to grow organic recycling capacity. **Request for CARB:** Provide a compliance pathway for use of RNG for specialty and/or weight sensitive applications vehicles that will not have a ZEV option in the short- or medium-term. It is recommended for CARB to extend the 'Waste and Wastewater Fleet Option' to specialty and/or weight sensitive vehicles fueled with biomethane.
10) Provide vehicle useful life clarification for exempt vehicles in 'ZEV Milestones Option'	**Purpose:** To more clearly understand regulatory compliance options. **Request for CARB:** For fleets using the 'High Priority and Federal Fleets ZEV Milestones Option' compliance option, regarding ICE vehicle purchases that utilize an exemption, clarification is requested to understand if these vehicles can utilize a "minimum useful life," and clarification regarding how ICE vehicle purchases that utilize an exemption impact the count of vehicles the ZEV percent milestones apply.
11) Request for a mandate standardizing vehicle charging platforms	**Purpose:** To support fleets having limited real estate space to install electric vehicle charging infrastructure to maximize the quantity of vehicles that can be charged at a facility. Currently, if a fleet purchases electric Ford pick-up trucks, electric International flatbeds, electric Chevy one-tone crew trucks, and electric Peterbilt lube trucks, four different charging stations would be required to support these trucks. **Request:** Create a mandate standardizing manufacturer vehicle charging platforms.

12) Expand the ZEV purchase exemption list of configurations	**Purpose:** To address overly burdensome requirements to achieve validated exemptions for vehicles. **Request for CARB:** Expand the 'ZEV Purchase Exemption List' inclusion of configurations with attention to vehicles that will not have ZEV option for multiple years.
13) Address construction vehicles that do not return to a specific yard each day	**Purpose:** To provide an accurate representation of impacts to fleets because of the proposed ACF regulation, and to provide a realistic mode for compliance with the proposed ACF regulation. As background information, statewide, construction fleets have foremen and lead men who drive their trucks home each night and drive straight to a jobsite in the morning. If these trucks are to be charged prior to returning to the personnel's home, it may likely add an hour or more to each personnel's work day to find the appropriate charging station. For example, a fleet of 100 trucks between 8,000 – 33,000 pounds gross vehicle weight rating has a full burden cost per hour for foremen and lead men at $115 for the person and truck per hour. If each foreman and lead man use an additional hour for 220 days per year, this equates to an additional $2,530,000. If construction fleets have foremen and lead men fuel their trucks at their home, the cost to support this activity related to infrastructure also needs to be reflected in the proposed ACF regulation's Statement of Reasons. **Request for CARB:** Address construction vehicles that do not return to a specific yard each day within the 'High Priority and Federal Fleets Requirements' and correlating Statement of Reasons.
14) Address towed construction vehicles that build out infrastructure	**Purpose:** To provide a realistic mode for compliance for towed construction vehicles that build out infrastructure in lieu of requesting an exemption for each truck, each year, for the life of the truck. For example, water trucks do not reside at a yard but are moved from job to job on a low bed truck. Charging infrastructure will not be available for where these water trucks operate because they are part of the process that builds out this infrastructure. **Request for CARB:** Address towed construction vehicles that build out infrastructure within the 'High Priority and Federal Fleets Requirements' and correlating Statement of Reasons.

15) NOx Exempt Area Extensions	**Purpose:** Historically, CARB has delayed compliance for vehicles that operate solely within NOx Exempt Areas of California, which are less polluted areas of the state. Accordingly, the proposed ACF regulation should establish separate, less stringent performance requirements for vehicles that operate in these areas that will still provide for the emissions reduction needed. **Request for CARB:** Provide delayed compliance for trucks that operate exclusively in less polluted areas of the state, identified as a NOx Exempt Area, that will still provide for the emissions reduction needed.

Again, thank you for your consideration and please feel free to contact me with any questions, concerns, or to further discuss at (951) 941-7981 or at sseivright@calcima.org.

Sincerely,

Suzanne Seivright-Sutherland
Director of Regional Governmental Affairs and Grassroots Operations

Attachment:
1. CalCIMA comment letter submit on October 17, 2022.

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October 17, 2022

BY ELECTRONIC SUBMITTAL

Clerk's Office
California Air Resources Board
1001 I Street
Sacramento, CA 95814
URL: https://ww2.arb.ca.gov/applications/public-comments

Re: Advanced Clean Fleets Regulation
Initial Statement of Reasons and
Environmental Assessment
Public Comments

Dear Chair Randolph and Members of the California Air Resources Board:

We represent the California Construction and Industrial Materials Association ("CalCIMA"), a non-profit organization and trade association for the construction and industrial material industries in California, which includes producers of construction aggregates, industrial minerals, and ready mixed concrete. CalCIMA is the statewide voice of the construction and industrial materials industry. With over 500 local plants and facilities throughout the state, producing aggregate, concrete, cement, asphalt, industrial minerals, and precast construction products, our members produce the materials that build our state's infrastructure, including public roads, rail, and water projects; homes, schools and hospitals; assist in growing crops and feeding livestock; and play a key role in manufacturing consumer products as well, including roofing, paint, low-energy light bulbs, and battery technology for electric cars and windmills. The continued availability of our members' materials is vital to California's economy, as well as ensuring California meets its renewable energy, affordable housing, and infrastructure goals. We are certain the district shares our objective of ensuring the proper permitting of these facilities. CalCIMA previously submitted letters during this process on October 29, 2021 and June 17, 2022.

We and CalCIMA have reviewed the Initial Statement of Reasons ("ISOR")—including the accompanying Environmental Assessment ("EA")—for the proposed Advanced Clean Fleets regulation (the "Regulation"). As described in more detail below, our review indicates the Regulation, as currently drafted, lacks sufficient standards and precision for consistent and reasonable application, and does not address foreseeable shortfalls of infrastructure, electricity, and suitable vehicles. To address these issues, CalCIMA proposes either revisions to the regulatory language or a framework for revisions. ***Each of CalCIMA's proposed***

solutions is specifically crafted to work within the existing structure of the Regulation, and we discuss each solution in context below. These solutions include:

- Providing sufficient standards, and accurate or precise definitions of terms that include "available to purchase," "commercially available," and "configuration," to ensure consistent and practical application of the Regulation;
- Including exemptions that address foreseeable shortfalls in the availability of electricity supplies, infrastructure, and certain vehicle types;
- Providing for an appeal process from staff determinations regarding exemptions;
- Providing for the continued use of natural gas-powered vehicles and substitution of diesel vehicles where no substitute battery electric ("BE") or other zero-emission vehicle ("ZEV") for a Class 8 construction vehicle is available;
- Providing for an alternative pathway for fleet owners and operators to transition directly to hydrogen fuel cell ("HFC") vehicles, particularly where no acceptable BE or other ZEV is available; and
- Providing more accurate classifications of certain vehicles, to ensure compliance with the Regulation where possible.

For ease of reference, we also have compiled CalCIMA's proposals in Attachment 1 to this letter. The California Air Resources Board ("CARB") should, at a minimum, revise the ISOR and Regulation to incorporate solutions to address the issues identified.

1. The Regulation is Impermissibly Vague and Vests Unfettered Discretion on CARB Staff for Future Determinations Regarding Exemptions.

The Regulation appears to recognize that at least some vehicles or vehicles types may not be available within the compliance period or, even if vehicles are available on the market, deliveries may be delayed. However, it leaves key terms undefined, depriving the determination and exemption processes of adequate guardrails to ensure uniform implementation, and leaving the Regulation unable adequately to address actual market conditions at the time compliance becomes required.

(a) The Regulation Fails to Define Key Terms or Provide an Appeal Process for the ZEV Unavailability Exemption.

Section 2015.1(c)(5) provides a limited exemption for equipment for which ZEV alternatives are unavailable:

> "ZEV Unavailability. Fleet owners may purchase a new ICE vehicle and exclude it from the ZEV addition requirements of section 2015.1(a) if no ZEV

> and no NZEV ***of the needed configuration is commercially available*** and the conditions of section 2015.1(e) are met."

(Emphasis added.) Similarly, section 2015.2(e)(5) provides:

> "(5) ZEV Unavailability Exemption. Fleet owners may purchase a new ICE vehicle and exclude it from the ZEV milestone calculation of section 2015.2 if the fleet owner can demonstrate that all the remaining ICE vehicles in the fleet that are not already using an exemption or extension cannot be replaced with a ZEV or NZEV ***of the needed configuration*** because they are ***not available to purchase***, and the conditions of section 2015.3(e) are met. Additionally, if the only remaining ICE vehicles in the fleet cannot be replaced with a ZEV or NZEV ***of the needed configuration*** because they are ***not available to purchase***, and the conditions of section 2015.3(e) are met, those ICE vehicles are excluded from the ZEV milestone calculation."

(Emphasis added.) Section 2015(b) defines "configuration" as:

> "Configuration" means the primary ***intended function*** for which a vehicle is designed as determined by the body of a complete vehicle or by the equipment integrated into the body that is permanently attached to the chassis. It does not include auxiliary equipment or secondary uses of equipment that is added to or carried on the vehicle body."

(Emphasis added.) The Regulation does not define "commercially available" or "available to purchase." Also, it defines "configuration" only in terms of purpose, but not considerations such as capacity or other features. Thus, the Regulation provides no criteria or standards to guide CARB staff (or any implementing official) in determining whether a particular ZEV either: (1) satisfies crucial operational criteria and specifications of the internal combustion engined vehicle ("ICEV") it is intended to replace, or (2) is available for purchase on commercially reasonable terms (cost, timeline for delivery, capacity, testing and performance standards, etc.). The regulation is, therefore, impermissibly vague, because it vests unbridled discretion in CARB staff determining the models that qualify for the ZEV Unavailability exemption, according to § 2015.3(e), and in determining whether that model is truly "commercially available" or "available to purchase."

Further, the Regulation does not appear to provide an appeal process of the refusal to grant an exemption, or of a staff determination of whether a particular truck provides the "needed configuration," which compounds this problem. For example, section 2015.3(e)(4) requires written confirmation from the manufacturer that the weight class of the vehicle to be replaced cannot be accommodated either by a vehicle in a comparable weight class or in a heavier weight class; this provides no opportunity for a fleet owner to demonstrate whether the use of a vehicle in the next higher weight class is feasible, given the fueling/charging and other facilities the fleet owner operates, or the operating conditions. The inquiry is limited

to whether the manufacturer could theoretically configure a chassis without violating certain safety standards, and not to any other considerations, including reasonable cost (a necessary element of "available to purchase," as provided below), reliability or maintenance and down-time requirements, and functional equivalence.

This method of determination exposes the vehicle consumer to significant risk of fraud and monopoly market power manipulation and, as currently drawn, can effectively constitute a mandate to purchase deficient equipment. This is not a theoretical problem, given the known teething problems that have occurred with other truck technologies, such as the first commercially available compressed natural gas ("CNG") power units, even if problems were eventually resolved.

(b) The Regulation Must Incorporate More Precise Definitions for the ZEV Unavailability Exemption.

Given the foreseeable problems described above, the Regulation must include a definition of "commercially available" or "available to purchase"—and likely should employ a single term to maintain definitional consistency across the Regulation—that incorporates specific, measurable criteria to provide uniform application and fiscal protection. CalCIMA suggests inserting the following definition of "available to purchase" into section 2015(b):

> "'Available to purchase' and/or 'commercially available' means a vehicle that comes in the needed configuration to do the work or perform the necessary services the fleet owner would achieve with an ICEV. It meets all of the following criteria: The vehicle does not cost more than 1.5 times more than the ICEV technology it replaces; the vehicle fulfills the duty cycle and work needs of the vehicle it replaces without necessitating the purchase of additional vehicles or equipment; and the vehicle must meet the requirements of 13 CCR section 1956.8 and 17 CCR section 95663 as amended by the Zero-Emission Powertrain Certification regulation."

These additions would allow CARB to track costs and ensure accurate modelling of the effects of the Regulation and future regulations. Such a definition also ensures that the powertrain of the ZEV that is "available to purchase" has received some evaluation of performance and reliability and considers functional equivalence, and has received some form of CARB certification.

Also, to ensure the definition of "configuration" takes into account all relevant vehicle characteristics, CalCIMA suggests substituting the following definition for the existing one in section 2015(b):

> "'Configuration' means a unique combination of basic vehicle inertia weight, axle ratio and spacing, cargo body type, payload capacity as applicable, and is designed to achieve a specified performance output."

Additionally, the regulations for the Clean Air Act contain a definition of "complete vehicle" at 40 CFR § 1037.801, which reads:

> "A complete vehicle is a functioning vehicle that has the primary load carrying device or container (or equivalent equipment) attached. Examples of equivalent equipment would include fifth wheel trailer hitches, firefighting equipment, and utility booms"

Does the ISOR and—by extension—the definition of "configuration" quoted above, incorporate this definition, or does the ISOR intend a separate definition not provided in section 2015(b) of the Regulation? If so, CARB either should include a reference to the Code of Federal Regulations for "complete vehicle," include the intended definition within section 2015(b) of the Regulation.

Together, this definition and the others suggested below also address an acknowledged problem with the limited availability of technology and model options, and avoids potential environmental effects associated with replacement ZEVs of different configuration; for example, if zero-emission haul trucks or ready-mix concrete trucks provide substantially lower capacity. The need to maintain a significantly larger fleet than existing could: (1) prove infeasible for space and infrastructure reasons, and (2) lead to additional, undisclosed impacts. For example, CARB acknowledges non-exhaust sources—including brake wear, tire and road wear, clutch wear and road dust resuspension—as increasingly dominant source of pollutants as tailpipe emissions are reduced by ZEV and non-ZEV ("NZEV") fleets, and as vehicle miles travelled ("VMT") correspondingly increase.[1] CARB has participated in studies to quantify such emissions and therefore has the capability and obligation to make a reasonable effort at disclosure of these effects. *Sierra Club v. County of Fresno*, 6 Cal.5th 502 (2018) ("*Friant Ranch*").

(c) The ZEV Unavailability Exemption Must Include Pickup Trucks.

The current language of the ZEV Unavailability Exemption "will not include pickup trucks . . ." and will only include vehicles with a gross vehicle weight rating greater than 14,000 lbs. However, even heavy-duty pickup trucks, such as the one-ton Ford F-350, have a gross vehicle weight rating of less than 11,500 lbs., consistent with their classification in section 471 of the California Vehicle Code. Consequently, any pickup truck—not merely light-duty models—falls outside the ZEV Unavailability Exemption.

This represents a substantial problem for the construction and construction materials industry, because pickups are commonly used for materials transport and—crucially—for towing equipment to and from work sites. Available examples of BE versions of current-

[1] *See* https://ww2.arb.ca.gov/resources/documents/brake-tire-wear-emissions.

model pickup trucks have demonstrated, in testing conditions, limited payload capability and towing range, and they have struggled even in consumer applications.[2]

Consequently, it is clear the current BE models are not suited for the commercial and industrial applications in which CalCIMA members widely employ the ICE versions. The ZEV Unavailability Exemption, as currently written, simply assumes the future availability of these vehicles with the necessary power to function in the ICE versions' current roles: it provides no relief for fleet owners and users if the available models cannot comparably function, and simply would not permit their replacement.

To address this issue, CalCIMA proposes that CARB modify the ZEV Unavailability Exemption in section 2015.3(e) of the Regulation, as follows:

> "The Executive Officer will maintain a list of vehicle configurations that are eligible for this extension on the CARB Advanced Clean Fleets webpage. The list will include commercially unavailable vehicles with a GVWR greater than 14,000 lbs. and will not include ~~pickup trucks,~~ two-axle box trucks, vans, or any tractors. However, notwithstanding the minimum GVWR stated above, the list will include pickup trucks."

If CARB's assumptions regarding that class of vehicle prove accurate, fleet owners and operators will not be able to avail themselves of that portion of the exemption. However, if the opposite proves true, the loss of such ubiquitous vehicles from construction and construction materials fleets would represent a substantial blow and would effectively require the use of significantly larger vehicles than necessary, at significantly greater cost; with greater emissions from, among other sources, tire and brake wear; and with greater risks with respect to workers, other pedestrians, and other small vehicles.

(d) The Regulation Should Provide an Alternative Pathway for a Transition Directly to Hydrogen Fuel Cell Vehicles.

This issue extends beyond environmental impacts and into economic effects, particularly disparate effects among certain kinds of operators for whom battery electric ("BE") vehicles of certain types are not and may not be commercially available, and the economic effects of operating dual-powered fleets and maintaining two fueling infrastructures at a single facility. For example, hydrogen fuel cell ("HFC") vehicles may provide a more feasible and sustainable long-term option for the construction materials industry (or any industry with similar requirements), due to its higher suitability for long-haul truck applications or

[2] *See, e.g.*, https://www.motortrend.com/reviews/ford-f150-lightning-electric-truck-towing-test/#:~:text=How%20Much%20Can%20the%20Ford,%2D%20and%20motor%2Dcooling%20capacity.

facilities in remote areas. Fleet milestone adoption could be implemented in the form of an extension in compliance with the ZEV minimum fleet composition requirements.

That language would assist operators for whom a transition to HFC vehicles is the logical operational endpoint, and for whom a requirement to purchase BE vehicles to achieve short-term compliance will force a double investment: first to provide BE charging infrastructure (assuming availability of BE vehicles), and then to pivot to HFC to realize its operational benefits, with maintenance obligations for both during the service lives of the fleets. Creating a commitment to HFC implementation, with an alternative compliance pathway prior to achieving an HFC fleet, also helps inform those manufacturers and investors of future business availability, which CARB states is an objective of the Regulation.

(e) The Regulation and ISOR Misclassify Key Vehicles, and Must Correct Those Classifications.

We also note the construction industry makes heavy use of ready-mix concrete trucks, which the Regulation appears to categorize in various locations as "specialty vehicles" and "work trucks." We also note that CARB deleted the definition of "concrete mixer" included in prior drafts of the Regulation. Ready-mixed concrete trucks are not work trucks: as reflected in the definition provided section 2015(b) of the Regulation, and explained in prior comments from CalCIMA and the WSTA, the vehicles' gross weight of 33,000 lbs. or more and heavy front axles place them solidly within the specialty vehicle definition.

Consequently, CARB must revise the Regulation to ensure the accurate classification of ready-mixed concrete trucks as "specialty vehicles." CalCIMA proposes the following addition to section 2015(b):

> "'Specialty vehicle' means one of the following:
>
> "(A) A vehicle with a GVWR greater than 33,000 lbs. and with a heavy front axle (examples include ready-mixed concrete trucks and powder trucks); or"

This will ensure applicable phase-in and exemption periods apply to them, particularly given the technological challenges in developing adequate replacements.

2. The Daily Usage Exemption Must Account for the Availability (or Lack Thereof) of ZEVs.

Implementation of this exemption is inextricably intertwined with the definitional problems of "available to purchase" and "configuration" that exist in the ZEV Unavailability Exemption, as described above. Specifically, the exemption as currently written requires a percentage of ZEVs in an owner's or operator's fleet that may be or remain unattainable for a substantial period of time, as manufacturers adjust and bring new products to the market, and refine their designs. Further, to the extent the exemption must be substantiated with data collected from other ZEVs in the same fleet, the lack of availability of ZEVs presents a second problem. Lastly, no rationale appears to exist to limit this exemption to a certain

subset of vehicles regulated by the rule; rather, the exemptions should encompass all vehicles subject to the Regulation, and must respond to the vehicle types that require replacement, rather than any ICEVs. Lastly, no rational basis exists to require each fleet owner or operator to purchase a specific vehicle or vehicles and then evaluate them and provide evidence of why they do not fulfill the function for which they were purchased; such a requirement imposes a disproportionate burden on individual owners and operators. Rather, provision of information for a vehicle intended for a specific use type should be able to occur from any source, including data from a different—but similar—fleet or an industry or other group with the ability to aggregate data for the same or similar vehicles across fleets.

CalCIMA proposes the following modifications to section 2015.3 of the Regulation to address these problems:

> "(b) Daily Usage Exemption. Fleet owners may apply for an exemption to replace ICE vehicles ~~with a GVWR greater than 14,000 lbs. if at least ten percent of their California fleet is comprised of ZEVs or NZEVs.~~ Fleet owners may not apply for a vehicle configuration that is commercially available as: an NZEV; a hydrogen fuel cell ZEV; a Class 7 or 8 ZEV tractor or ZEV three-axle bus with a rated energy capacity of at least 1,000 kilowatt-hours; a Class 4 through 6 ZEV with a rated energy capacity of at least 325 kilowatt-hours; a Class 4 through 6 ZEV with a rated energy capacity of at least 325 kilowatt-hours; or a Class 7 or 8 ZEV that is not a tractor or three-axle bus with a rated energy capacity of at least 450 kilowatt-hours and is commercially available. The Executive Officer will approve the exemption based on ~~their good engineering judgement in determining that~~ the criteria specified in section 2015.3(b) ~~have been met~~. The fleet owner must submit all of the following by email to TRUCRS@arb.ca.gov to apply:
>
> > "(1) The make, model, weight class, configuration, and photograph of the ICE vehicle to be replaced.
> > "(2) Identify the commercially available ZEV with the highest rated energy capacity available in the same weight-class and configuration as determined on the CARB Advanced Clean Fleets webpage as commercially available. Submit the make, model, weight class, configuration, and rated energy capacity of the ZEV.
> > "(3) Calculate the range of the vehicle in miles by dividing the rated energy capacity of the identified ZEV by the following factors: for Class 4 through 6 vehicles, 1.3 kilowatt-hours per mile; for Class 7 and 8 non-tractors, 1.8 kilowatt-hours per mile; for Class 7 and 8 tractors, 2.1 kilowatt-hours per mile. For vehicles that operate truck mounted or integrated equipment while stationary, in lieu of calculating the needed rated energy capacity is the same as the optionally submitted measured ZEV energy use of section 2015.3(b)(6). Submit the calculations and results.

"(4) A daily usage report for a period of a least 30 consecutive workdays from within the last 12 months using telemetry data or other industry accepted data collection method for all ICE vehicles of the same weight class and configuration of the vehicle to be replaced. The report must include the daily miles traveled for each vehicle. ~~Identify the lowest mileage reading for each day and exclude the 3 highest readings~~. For the exemption to be granted, the highest remaining mileage number must be greater than the range calculated in 2015.3(b)(3).

"(A) For vehicles that operate truck mounted or integrated equipment while stationary, the daily usage report must include daily equipment usage information such as hours of operation.

"(B) For construction vehicles supplying optional data via (b)(6), a construction vehicle fleet can omit calculations for (b)(4).

"(5) A description of the daily assignments or routes used by existing vehicle types with an explanation of why all commercially available ZEVs of the same weight class and configuration 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 <u>without incurring additional labor costs and delays, or resulting in material damage and spoilage</u>.

"(6) Optionally substantiate their exemption request by submitting measured ZEV energy use data from ZEVs of the same configuration already operated on similar daily assignments ~~in the fleet's service~~. Optional information ~~must~~ <u>can</u> include vehicle loading and weight data, route grade, <u>and</u> average ambient daily temperature, ~~and state of charge at the beginning and end of the daily shift to show typical daily energy usage over one month of regular service~~. <u>Fleet owners may also submit documentation from ZEV manufacturer data collected from ZEVs in actual service to substantiate the claim. Vehicles that lack stable routes, service rural routes without charging infrastructure, or require the capacity to do work at remote locations after travel may submit evidence of this when seeking this exemption.</u>

These changes allow the Regulation to address the operational realities of vehicles subject to replacement. For example, the requirement to identify the lowest mileage readings and exclude the three highest readings artificially—and falsely—biases the mileage of the subject vehicle(s) lower than actual operating conditions establish: that a vehicle may only occasionally travel a certain mileage does not mean the vehicle does not need to do so to perform its work. Even more problematically, a focus on the lowest mileages understates the work the owner or operator regularly asks of its vehicles, and does not provide a basis for determining whether a ZEV could provide an adequate replacement.

Additionally, some charging or fueling activities for ZEVs would conceivably occur during driver rest periods or workday breaks. However, until infrastructure is available to permit recharging in approximately the time required for refueling, for example, a diesel ICEV,

extensive delays could occur that could necessitate longer driver shifts or additional driving crew. Further, some construction materials, such as ready mixed concrete, have finite lifespans, and delays in delivery—particularly in increasingly common warm-weather conditions—have greater potential to permit spoilage of that material. Thus, accounting for such conditions, particularly among specialty vehicles, is crucial to ensuring equivalence in available ZEVs.

3. The ISOR Does Not Adequately Address or Respond to the Infrastructure Necessary to Implement the Regulation.

CEQA requires an analysis to evaluate the effects of indirect impacts, including foreseeable future growth, both as the result of the requirement or incentive to provide that growth, as well as the necessity of that growth to realize objectives of the Regulation the ISOR characterizes as central. CEQA Guidelines §15064(d)(2). Foreseeable indirect or secondary effects that occur later in time or more spatially distant than direct effects also require analysis. CEQA Guidelines §§ 15064(d)(3), 15358(a)(2). Indirect effects include growth-inducing and other effects such as changes in land use, population density, or growth rate induced by a project. 14 Cal Code Regs §15358(a)(2). In *City of Antioch v. City Council of the City of Pittsburg*, 187 Cal. App. 3d 1325, 1336 (1986), found that analysis of a road and sewer project also must evaluate the housing those improvements could facilitate, because the infrastructure could not "be considered in isolation from the development it presages." Id. Accordingly, the court held the project should not go forward until such impacts were evaluated under CEQA. *See id*. at 1337-38.

The ISOR and EA need not precisely identify the locations of future infrastructure—physical development that they acknowledge is required to implement the Regulation—to attempt to provide a reasonable analysis of the associated environmental effects. Rather, the EA must disclose all that it reasonably can. *Friant Ranch*, 6 Cal.5th at 520. As the *Friant Ranch* court stated, the impact analysis must give a sense of the "nature and magnitude of the health and safety problems… [or] explain why it was not feasible to provide an analysis." 6 Cal.5th at 520. That EIR's conclusion that implementation of MM would "substantially reduce" impact, without further explanation or factual support, amounted to a "bare conclusion" that did not satisfy CEQA's disclosure requirement. 6 Cal.5th at 522. Similarly, in *City of Hayward v Board of Trustees of Cal. State Univ*., 242 Cal.App.4th 833, 859 (2015), an EIR for a university campus expansion plan and enrollment increase failed to evaluate the secondary environmental effects that could result from increased student use of nearby parks, and that failure fatally compromised the EIR.

(a) The ISOR and EA Fail to Evaluate and Disclose the Potential Construction-Related Effects of the Regulation Regarding Electricity Supply and Infrastructure.

Here, the Regulation would both effectively require—and is expressly intended to facilitate—expansion of electricity and fuel cell conveyance and charging/filling infrastructure. Thus, the connection here between the Regulation and future development is at least as

immediate as in *Hayward, supra*. Section 4.B.19 (Utilities) of the EA provides a limited discussion of energy demand, generation, and transmission, but simply dismisses any ability to discuss the impacts associated with improvements. Rather, the analysis and the ISOR appears simply to assume the availability of adequate generation capacity at the time(s) and location(s) needed.

But reasonable assumptions regarding certain elements of infrastructure are possible: indeed, the analysis estimates the number and type of charging and fueling stations anticipated to meet projected demand, and describes some initiatives to provide for that construction. However, despite the availability of reasonable assumptions regarding development, the discussion of construction-related impacts does not even attempt to quantify emissions or tie those emissions to public health outcomes, and no evidence in the record states why reasonable assumptions for analysis are not possible. Further, even to the extent the discussion addresses some construction effects, it relies on future discretionary action by other agencies, such as air districts or other local agencies; but these actions may or may not require discretionary action, and therefore may not provide opportunities to impose any specific mitigation measures other than those already required by applicable rules and regulations. For all of these reasons, the EA here must consider the potential for development that could occur under the terms of the Regulation. The failure of the EA to consider that growth necessarily results in the failure adequately to disclose the nature and extent of Project impacts, and the failure of the Regulation to provide adequate safeguards for operators for whom infrastructure and generation capacity are unavailable when required for compliance.

(b) Electrification will Substantially Increase Demand for Electrical Generation Capacity.

The electricity and equipment needed to shift to a BE fleet is substantial. Existing infrastructure, even to existing facilities that operate heavy machinery with high electricity demand, cannot deliver the necessary loads. For example, a 50-truck base-case fleet, with 100 kW of required charging capacity at 480 volts, would require an input of 111kW AC at 134 amperes. The ability to charge the entire fleet simultaneously would require about 6,700 amperes. This capacity alone would require four transformers rated at 1.5 megavolt amperes ("MVA") and four pieces of 2000-ampere switchgear; greater charging capacity would require more equipment. Even assuming the ready availability of this equipment—which itself would require a major capital expenditure—the extension of infrastructure to such a site represents a major undertaking for both utilities providers and owners and operators, and also would require the availability of power in the local area.

The ISOR suggests that operators would not need to maintain charges for entire fleets, and analogizes to fleets in which some of the trucks would routinely remain partially fueled. But the nature of ICEVs permits storage of unfueled (or nearly unfueled) trucks in ways that are not practical with BE-powered trucks: specifically, fueling a truck to place it into service as a primary or backup piece of equipment requires minutes; charging a BE truck can require hours before it can be put into service. Consequently, although it may be possible that some

small portion of a fleet could be maintained at minimal charge, as a practical matter it is not true that any substantial portion could be so maintained.

(c) The Utilities Discussion Simply Assumes, without Evidence, the Availability of Infrastructure and Electricity.

The ISOR, and the Utilities and Service Systems analysis in the EA (Appx. D, § IV.B.19; the entirety of which comprises two pages), simply assume the Regulation's, "increased deployment of ZEVs ***could result in a relatively small increase*** in production of electricity and hydrogen fuel" (emphasis added), as well as additional extraction of minerals and other effects. (p. 105.) The discussion relies on a number of assumptions for which the EA does not appear to provide substantial evidentiary support. Chief among these is the omission of any construction impacts discussion associated with infrastructure build-out, to accommodate the anticipated loads and serve facilities that house and charge EVs, and a sole focus on long-term operational impacts. (*See* pp. 105-106.)

The analysis concedes, as it must, the necessity of the construction of additional infrastructure for electricity and hydrogen, but simply declares any actual analysis of effects speculative. This is despite the ISOR referencing "robust" CPUC planning policies that could permit some reasonable assumptions regarding capacity, and—as described above—the discussion itself providing estimates of the number and types of charging/fueling facilities anticipated.

Further, the discussion of operational effects does not address energy delivery, but only secondary effects such as increased construction of BE vehicles and increased mining activity for minerals used in BE technology, particularly batteries, and disposal issues associated with the same. (*Id.*) The discussion and Regulation assume that energy will simply be available when needed. This appears based on the assertion in the ISOR that because policy generally requires a 15% buffer between demand and generation capacity for electricity, electricity generally will be available. The same discussion briefly acknowledges the existence of reliability and climate-related variability issues and the need for more robust systems; however, a single passing mention fails to illustrate the scale of the problem and the potential impact on electrification efforts. For example, according to Climate Central, 83 percent of power outages across the United States between 2000 and 2021 resulted from weather conditions that are expected to worsen.[3] California reported the third-most outages in the country, with 44 outages—more than one third of the 129 outages since 2000—occurring between 2019 and 2021, of which California Independent System Operator ("CalISO") initiated 14 pre-emptively to avoid broader outages.[4] The CalISO only

[3] https://www.cnn.com/2022/09/14/us/power-outages-rising-extreme-weather-climate/index.html; https://www.climatecentral.org/climate-matters/surging-weather-related-power-outages.
[4] *Id.*

narrowly avoided rolling power outages in the summer of 2022,[5] and officials anticipate conditions will worsen.[6]

The reliance of the ISOR on local agencies to develop infrastructure and resources exacerbates this problem. CARB explicitly renounces responsibility for construction, oversight, or permitting for infrastructure and energy development projects, and does not exercise or purport to exercise any authority to ensure or even accelerate delivery. Consequently, CARB cannot provide any assurance of availability, and neither the ISOR nor the Regulation provide any meaningful discussion of—or relief to address—this issue.

Based on the above, CARB must revise the ISOR and Regulation to include the following:

- Reflect the extent of the new generation capacity and associated infrastructure necessary to its implementation, and

- Provide appropriate relief to owners and operators that do not have the access to these resources that is necessary to comply with the Regulation.

The Regulation could incorporate these provisions into an existing exemption (e.g., Infrastructure Unavailability—addressed below) or create a new exemption, but must do so in some form. Absent any attempt to do so, the analysis has no basis for its conclusion, and does not provide the information necessary to permit the public and decisionmakers to draw accurate conclusions regarding the relative benefits and adverse effects of the Regulation, or for the ability of operators to comply with the Regulation if electrical infrastructure or generation capacity is not available.

(d) The Infrastructure Unavailability Exemption Requires Additional Flexibility to Address Actual Conditions with Respect to Infrastructure and Electricity Generation Capacity.

In any case, neither the ISOR nor the EA provides any basis for the assumption that electrical infrastructure and generation capacity would be available in the amounts needed at the time fleet owners and operators would be required to purchase vehicles and support their operation. Consequently, the current exemption for infrastructure construction delay, provided in § 2015.3(c) of the Regulation, is too narrowly drawn:

> "Infrastructure Construction Delay Extension. Fleet owners shall receive ***a one-year extension*** from the ICE vehicle removal requirements of section 2015.1(b) and delay delivery of ordered ZEVs that would be reliant

[5] September 6, 2022 Emergency Alert Declaration available at: https://www.caiso.com/Documents/rotating-power-outages-are-now-possible-to-protect-grid.pdf.
[6] https://www.climatecentral.org/climate-matters/surging-weather-related-power-outages.

> on the ZEV charging or fueling infrastructure ***for one year*** if the criteria described in section 2015.3(c) are met."

(Emphasis added.) Section 2015.3(c) appears to provide only for a single one-year extension per project, and only for construction delays that occur subsequent to signed contract for infrastructure installation. It does not address the key issue of whether infrastructure is available in the area that a utility could extend to a facility, particularly if that facility is located in a remote area; it also does not address whether sufficient electricity generation is available even if the infrastructure were available to deliver it at the time that compliance with the Regulation requires orders of BE vehicles or other ZEVs. No evidence demonstrates—or even suggests—that one year is sufficient to assure delivery of infrastructure or electricity where either may not be available.

Consequently, CARB must revise the exemption to include the following:

- An exemption period that applies as long as owners or operators can substantiate the lack of availability of infrastructure, as otherwise required by the Regulation; and

- The exemption also must apply when owners or operators can demonstrate electricity is unavailable, even where infrastructure is available.

Incorporating these revisions would allow the Regulation to account for State-wide and/or local conditions that prevent timely compliance, and would prevent operators becoming subject to penalties for the failure of utilities to provide adequate generation capacity or a means of delivering the energy to an area or facility. Further, the proposed language would permit application for the extension at the time an operator must order vehicles to comply with the milestones provided in the Regulation. This language also would align the Regulation with the stated uncertainties in the ISOR regarding electricity supply, and would mitigate the effects of those uncertainties.

4. All Exemptions Must Include an Appeal Process.

Although manufacturers and fleet owners and operators have some input into the initial development of certain exemption criteria: they may, for example, propose vehicles for inclusion in the list of exempted ZEVs, as provided in section 2015.3(e). However, any proposal for listing a vehicle is simply subject to the "good engineering judgment" of the Executive Officer or their designee; the Regulation provides no mechanism for dispute regarding a listing decision. Similarly, the decision on any application for an exemption lies exclusively with the Executive Officer or their designee, with no appeal.

Consequently, CalCIMA proposes the addition of an appeal process for initial determinations on all exemptions. Such appeals must be to the CARB itself.

As described above, several exemptions suffer from ambiguities that vest too much discretion in the first instance. However, even assuming CARB addresses these ambiguities, an oversight or correction mechanism for these highly consequential staff-level decisions is

crucial to the prudent and consistent application of this exemption, and helps avoid the pitfalls of such discretion.

5. The Alternatives Analysis Dismisses Feasible Alternatives without Adequate Justification.

The ISOR characterizes the purpose of the Regulation in the following general ways: accelerate adoption of zero-emission vehicles ("ZEVs"), provide emission reductions consistent with the State Implementation Plan for the Clean Air Act (the "SIP") and human health, maintain and continue reductions in GHGs in accordance with adopted legislation, and providing "market certainty" for zero-emission technologies and infrastructure. However, the ISOR and EA reject certain alternatives based on narrow readings of these objectives, or addressing only a subset of these objectives. This error resulted in the improper rejection of Concepts 7 and 8 in the ISOR, and CalCIMA provides suggestions for addressing this impropriety.

The use of unduly narrow project objectives violates CEQA. *In Re Bay Delta Coordinated Environmental Impact Report Proceedings*, 43 Cal. 4th 1143, 1166 (2008) ("A lead agency may not give a project's purpose an artificially narrow definition"). Here, the Project objectives are read too narrowly. For example, although the Alternatives discussion of the ISOR (§ IX.B) discusses a range of concepts that the discussion did not carry forward for full analysis, the objectives regarding acceleration of ZEV adoption and GHG reductions are read so narrowly as to preclude limited protections for early adopters of technologies CARB previously encouraged and incentivized as GHG- and other emission-reducing measures.[7]

In its initial comments on the proposed Regulation, the Western States Trucking Association ("WSTA") suggested early action credit for adopters of RNG vehicles. The ISOR considered but rejected this alternative as Concept 7, based on the objective of the Regulation to reduce "GHGs"; that is, the objectives of the Regulation appear too narrowly drawn to exclude a number of criteria pollutants in "tailpipe emissions," and do not consider the lifecycle GHG emissions differences of fuel alternatives, including RNG; had it done so, CARB would have recognized the relative benefits of permitting RNG as longer-term bridge technology for companies that followed CARB's guidance by investing in the technology. Further, the discussion does not appear to consider other pollutants for which California counties currently remain in non-attainment, such as ozone and carbon monoxide ("CO").[8]

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[7] For example, alternative fuels encouraged in the 2018 Low Carbon Fuel Standard ("LCFS") rule amendments included renewable natural gas ("RNG") for the net reduction in NOx and particulate matter ("PM"). Both the ISOR and EA for that action defended RNG.

[8] U.S. EPA, 2022. California Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants. September 30. Available at: https://www3.epa.gov/airquality/greenbook/anayo_ca.html.

The ISOR also claims this concept would not reduce PM10 from tire wear, compared to existing vehicles, but does not explain how the Regulation would do so in comparison; indeed, a one-for-one replacement of vehicles would, in the absence of any data to the contrary, generate identical tire wear for distances travelled. However, the discussion—and the ISOR—does not establish the availability of direct replacement equipment for certain vehicles or vehicle types; rather, availability is hypothesized. For example, the regulation could foreseeably result in the availability only of lower-capacity vehicles for certain types, particularly specialty vehicles such as aggregate haul trucks or concrete mixers, which would result in significantly larger fleet sizes to maintain approximate current operations, increasing tire and brake wear and associated PM2.5 and PM10 emissions. Lastly, the ISOR claims this Concept would not achieve the goal of maximizing transportation electrification while resulting in no additional NOx, but the future use of hydrogen fuel cell ("HFC") technology—which is assumed and for which the ISOR provides a pathway—also would not appear to meet this objective.

Similarly, the best available control technology ("BACT") alternative (Concept 8) would allow the use of BACT for compliance with the Regulation and incorporates the concept of availability as a one-to-one correspondence of internal combustion-engined vehicles ("ICEVs") to ZEVs. The discussion asserts this concept would treat Non-ZEVs and ZEVs equally, and uses the example of drayage trucks to assert the concept could result in fewer ZEVs and more ICEVs. But this draws the concept—and its intent—too narrowly, and appears designed to permit rejection of this concept, particularly given the admittedly minor percentage of vehicles at issue:

> "The number of Class 2b-8 CNG vehicles projected for 2025 is already relatively small at ***approximately one percent of California's statewide heavy-duty vehicles***. Allowing a narrow exemption for an extremely small percentage of California's heavy-duty vehicles could result in unnecessary financial risk and the potential for stranded assets as ZEV technology improves and ZEV infrastructure expands. Staff is also concerned that the cost to operate existing CNG fueling stations and maintenance shops will grow with declining usage."

(Emphasis added.) But this again simply assumes the availability of ZEVs and associated infrastructure, and ignores the stranded assets this Regulation would create: as described above, CARB's prior rulemaking promoted RNG vehicles and encouraged their early purchase; the Regulation would itself create stranded assets by requiring the replacement of RNG vehicles, which were recently purchased and infrastructure recently installed, with diesel vehicles. In contrast, providing some form of relief for the existing early adopters of RNG vehicles would only represent, in the ISOR's own words, "a narrow exemption for an extremely small percentage" of vehicles, but still would provide significant environmental benefit.

(a) Similar Alternatives to Those Rejected are Needed to Address the Lack of ZEV Options for Specialty Construction Vehicles.

CalCIMA appreciates that CARB has recognized the inherent limitations and challenges of implementing BE-powered specialty vehicles and weight-sensitive vehicles. CalCIMA also agrees with CARB that market segment will drive sensitivity to weight; as CARB noted on page 100 of the ISOR,

> "[t]he sensitivity to weight is dependent on the market segment (e.g., bulk haulers, refrigerated haulers, dry van general freight operation). For example, bulk haulers (petroleum products, chemicals, aggregates) are the most weight-sensitive market segment, but only account for 2 percent of the total trucks on the road."

Trucks that haul aggregate to construction site are weight-dependent construction vehicles. However, other types are highly weight-dependent, as well: concrete mixers and bulk haulers of cement also constitute weight-dependent construction vehicles, and the Regulation must consider their status as such.

In this context, CARB's assessment is likely correct that viable BE solutions likely will not enter the market until the late 2030s. As the ISOR accurately observed,

> "It is necessary to limit the definition to Class 8 vehicles (GVWR >33,000 lbs.) because lighter vehicles can be rated into a higher weight class category if needed to adjust to any weight impacts from ZEV powertrains when Class 8 vehicle cannot. ***It is prudent to allow more time for technology improvements and expected weight reductions for heavier vehicles***."

(Appx. H-2; emphasis added.) Further, we understand CARB recognizes that vehicle weight reductions and associated shifts to less robust materials likely will not provide viable options for construction specialty vehicles, which must transport heavy payloads and operate on undeveloped, unpaved, and uneven surfaces. Collectively, these observations demonstrate that CARB (correctly) does not expect viable zero emissions technology for heavy-duty uses until sometime after 2030. Further, CARB considers construction specialty vehicles among the least likely for which a zero emission solution may become available in any case.

The Regulation as currently drafted would only provide relief from a ZEV requirement for these vehicles by permitting the continued use of diesel vehicles, rather than promote the use of RNG vehicles as a bridge technology. This will, perversely, ensure continuation of emissions-heavy diesel fleets for longer periods of time, until suitable ZEV vehicles are available. Thus, without a quantified understanding of how "bridge" technologies can support GHG reductions, while battery-electric ("BE") and HFC vehicular technology continue to advance, leaves the discussions of Concepts 7 and 8 unsupported by substantial

evidence, and does not represent a good-faith effort to address those alternatives, as required by CEQA.

This omission has even greater importance, because prior rules asked and incentivized CalCIMA's members to reduce vehicle emissions now and in the near-term. In response, many have heavily invested in currently available CNG/RNG technology, which provides significant reductions in emissions of criteria pollutants and GHGs from diesel. These investments occurred recently and with the reasonable expectation of a full lifecycle of use. Further, we believe CARB is aware of recent studies demonstrating that the environmental benefits of RNG, in comparison to diesel, are substantially greater than originally assumed.[9] This data conclusively contradicts prior assumptions embedded in CARB's analysis, and demonstrates that RNG has a place in emissions reductions strategies, particularly where ZEVs are not and may not be available in the short term.

Based on the above, CalCIMA proposes the following addition to section 2015.2(e) of the Regulation to address this narrow issue—CARB estimates two percent of trucks, of which we address only a subset—and allow immediate and substantial reductions of emissions (particularly NOx and PM2.5) that advance CARB's stated objectives for the Regulation:

> "(6) Class 8 Construction Vehicle Exemption: Class 8 specialty vehicles that deliver construction materials and/or conduct work on construction sites (examples include concrete mixers, powder trucks, and construction aggregate trucks) shall be exempted from this regulation, and fleet owners may continue to purchase natural gas-powered ICEVs until 2039, if the vehicles meet the following criteria:
>
> "(i) Based at a facility that is contracted to install or has installed depot fueling for natural gas vehicles; and
>
> "(ii) Part of a fleet for which the owner or operator has established fuel delivery contract provisions that require delivery of RNG to the extent feasible.

This measure is consistent with CARB's rejection of early-adopter credits for RNG vehicles (alternative Concept 8, as discussed above). This issue also is important because, as described above, the Air Quality analysis for the Regulation (Appx. D, § IV.B.3) fails to evaluate and disclose the potential emissions of the Regulation for all but two criteria pollutants (NOx and PM2.5) and GHGs, and purports to conclude that the only direct effect of the Regulation is beneficial. Even if the objectives of the analysis concern tailpipe emissions and GHG reductions, the analysis still must disclose other foreseeable criteria pollutant and GHG emissions that could result from implementation of the Regulation,

[9] See the presentation to the South Coast Air Quality Management District, available at: http://www.aqmd.gov/docs/default-source/technology-research/clean-fuels-program/clean-fuels-advisory-group-agenda_september-8-2022.pdf?sfvrsn=21.

including the different GHG emissions benefits of RNG when compared to electric vehicles from a lifecycle perspective. Although the analysis later concedes the indirect effects, such as construction activities associated with infrastructure build-out, would be significant, it does not even attempt to quantify any of those impacts, and therefore fails fully to disclose those impacts and fails to serve as an adequate informational document.

(b) CARB Should Complete an Assessment of Bridge Technologies.

CalCIMA recommends CARB complete a technology assessment that further evaluates the carbon intensity and lifecycle emissions, and potential reductions available, of alternative fuel and advanced technology vehicle applications, including "bridge" technologies such as RNG, while companies develop ZEVs with configurations that meet user requirements and that are commercially available/available to purchase. Such an assessment is necessary to ensure the informed consideration of alternatives to address foreseeable shortages of electricity generation capacity, and foreseeable infrastructure shortfalls.

6. CARB Must Incorporate CalCIMA's Proposed Changes to Ensure the Adequacy of the Analysis and Feasibility of the Regulation.

CalCIMA believes that a slightly modified version of the Regulation would provide the environmental benefits the ISOR asserts, while also providing the necessary flexibility to provide market certainty and address the defects described above. Therefore, CARB must, at a minimum, revise the ISOR and Regulation to accurately and fully address certain impacts of the Regulation. CalCIMA looks forward to working with CARB during the rulemaking process to ensure the potential effects of the Regulation are addressed in a practical and equitable manner.

Sincerely,

KERRY SHAPIRO of
Jeffer Mangels Butler & Mitchell LLP

KS:neb

Attachment 1: Compilation of Suggested Provisions

cc: (via email)
Robert Dugan, President and CEO, CalCIMA
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ATTACHMENT 1

PROPOSED REVISIONS TO THE ADVANCED CLEAN FLEETS REGULATION

CalCIMA proposes inserting the following definition of "available to purchase" and/or "commercially available" into section 2015(b):

> "'Available to purchase' and/or 'commercially available' means a vehicle that comes in the needed configuration to do the work or perform the necessary services the fleet owner would achieve with an ICEV. It meets all of the following criteria: The vehicle does not cost more than 1.5 times more than the ICEV technology it replaces; the vehicle fulfills the duty cycle and work needs of the vehicle it replaces without necessitating the purchase of additional vehicles or equipment; and the vehicle must meet the requirements of 13 CCR section 1956.8 and 17 CCR section 95663 as amended by the Zero-Emission Powertrain Certification regulation."

CalCIMA proposes including the definition of "complete vehicle" in section 2015(b) of the Regulation, whether by reference to 40 CFR § 1037.801 or by quotation, as follows:

> "A complete vehicle is a functioning vehicle that has the primary load carrying device or container (or equivalent equipment) attached. Examples of equivalent equipment would include fifth wheel trailer hitches, firefighting equipment, and utility booms"

CalCIMA suggests substituting the following definition of "configuration" for the existing definition in section 2015(b):

> "'Configuration' means a unique combination of basic vehicle inertia weight, axle ratio and spacing, cargo body type, payload capacity as applicable, and is designed to achieve a specified performance output."

CalCIMA proposes the following addition to the definition of "specialty vehicle" in section 2015(b):

> "'Specialty vehicle' means one of the following:
>
> "(A) A vehicle with a GVWR greater than 33,000 lbs. and with a heavy front axle (examples include ready-mixed concrete trucks or powder trucks); or"

CalCIMA proposes the following modifications to section 2015.3(b):

> "(b) Daily Usage Exemption. Fleet owners may apply for an exemption to replace ICE vehicles ~~with a GVWR greater than 14,000 lbs. if at least ten percent of their California fleet is comprised of ZEVs or NZEVs.~~ Fleet owners may not apply for a vehicle configuration that is commercially available as:

an NZEV; a hydrogen fuel cell ZEV; a Class 7 or 8 ZEV tractor or ZEV three-axle bus with a rated energy capacity of at least 1,000 kilowatt-hours; a Class 4 through 6 ZEV with a rated energy capacity of at least 325 kilowatt-hours; a Class 4 through 6 ZEV with a rated energy capacity of at least 325 kilowatt-hours; or a Class 7 or 8 ZEV that is not a tractor or three-axle bus with a rated energy capacity of at least 450 kilowatt-hours and is commercially available. The Executive Officer will approve the exemption based on ~~their good engineering judgement in determining that~~ the criteria specified in section 2015.3(b) ~~have been met~~. The fleet owner must submit all of the following by email to TRUCRS@arb.ca.gov to apply:

"(1) The make, model, weight class, configuration, and photograph of the ICE vehicle to be replaced.

"(2) Identify the commercially available ZEV with the highest rated energy capacity available in the same weight-class and configuration as determined on the CARB Advanced Clean Fleets webpage as commercially available. Submit the make, model, weight class, configuration, and rated energy capacity of the ZEV.

"(3) Calculate the range of the vehicle in miles by dividing the rated energy capacity of the identified ZEV by the following factors: for Class 4 through 6 vehicles, 1.3 kilowatt-hours per mile; for Class 7 and 8 non-tractors, 1.8 kilowatt-hours per mile; for Class 7 and 8 tractors, 2.1 kilowatt-hours per mile. For vehicles that operate truck mounted or integrated equipment while stationary, in lieu of calculating the needed rated energy capacity is the same as the optionally submitted measured ZEV energy use of section 2015.3(b)(6). Submit the calculations and results.

"(4) A daily usage report for a period of a least 30 consecutive workdays from within the last 12 months using telemetry data or other industry accepted data collection method for all ICE vehicles of the same weight class and configuration of the vehicle to be replaced. The report must include the daily miles traveled for each vehicle. ~~Identify the lowest mileage reading for each day and exclude the 3 highest readings~~. For the exemption to be granted, the highest remaining mileage number must be greater than the range calculated in 2015.3(b)(3).

"(A) For vehicles that operate truck mounted or integrated equipment while stationary, the daily usage report must include daily equipment usage information such as hours of operation.

"(B) For construction vehicles supplying optional data via (b)(6), a construction vehicle fleet can omit calculations for (b)(4).

"(5) A description of the daily assignments or routes used by existing vehicle types with an explanation of why all commercially available ZEVs of the same weight class and configuration 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 without incurring additional labor costs and delays, or resulting in material damage and spoilage.

"(6) Optionally substantiate their exemption request by submitting measured ZEV energy use data from ZEVs of the same configuration already operated on similar daily assignments ~~in the fleet's service~~. Optional information ~~must~~ can include vehicle loading and weight data, route grade, and average ambient daily temperature, ~~and state of charge at the beginning and end of the daily shift to show typical daily energy usage over one month of regular service~~. Fleet owners may also submit documentation from ZEV manufacturer data collected from ZEVs in actual service to substantiate the claim. Vehicles that lack stable routes, service rural routes without charging infrastructure, or require the capacity to do work at remote locations after travel may submit evidence of this when seeking this exemption.

CalCIMA proposes including the following elements in the Infrastructure Construction Delay Extension in section 2015.3(c) of the Regulation:

- An exemption period that applies as long as owners or operators can substantiate the lack of availability of infrastructure, as otherwise required by the Regulation; and

- The exemption also must apply when owners or operators can demonstrate electricity is unavailable, even where infrastructure is available.

CalCIMA proposes the following addition to section 2015.2(e) of the Regulation:

"(6) Class 8 Construction Vehicle Exemption: Class 8 specialty vehicles that deliver construction materials and/or conduct work on construction sites (examples include concrete mixers, powder trucks, and construction aggregate trucks) shall be exempted from this regulation, and may continue to purchase natural gas-powered ICEVs until 2039, if the vehicles meet the following criteria:

"(i) Based at a facility that is contracted to install or has installed depot fueling for natural gas vehicles; and

"(ii) Part of a fleet for which the owner or operator has established fuel delivery contract provisions that require delivery of RNG to the extent feasible.

CalCIMA proposes the following modification to section 2015.3(e) of the Regulation:

"The executive Officer will maintain a list of vehicle configurations that are eligible for this extension on the CARB Advanced Clean Fleets webpage. The

> list will include commercially unavailable vehicles with a GVWR greater than 14,000 lbs. and will not include ~~pickup trucks,~~ two-axle box trucks, vans, or any tractors. However, notwithstanding the minimum GVWR stated above, the list will include pickup trucks."

CalCIMA proposes, for all exemptions provided in the Regulation, the addition of an appeal process to CARB.