

October 17, 2022

Clerk of the Board  
California Air Resources Board  
1001 I Street  
Sacramento, CA 95814

**RE: Proposed Advanced Clean Fleets Regulation**

Dear Chair Randolph, Vice Chair Berg, and Members of the CARB Board:

Thank you for the opportunity to provide comments on the California Air Resources Board's (CARB) proposed Advanced Clean Fleets (ACF) regulation. GNA is a leading environmental consulting firm with more than 25 years of experience in low-emission and low-carbon technology adoption for the commercial fleet sector, including extensive electrification and hydrogen project implementation. GNA is involved in more medium- and heavy-duty zero-emission truck projects than anyone in the industry. Our clients are at the forefront of the transition to zero-emission medium- and heavy-duty vehicles and include public and private fleets, nearly every major electric OEM, utilities, infrastructure providers, public agencies, and community partners. We have successfully developed California's largest and most high profile zero-emission truck projects including: the Daimler Trucks North America Innovation and CX Fleet projects; the Frito Lay ZANZEFF project in Modesto, CA; the Volvo LIGHTS project; the JETSI project; and many others. GNA's team excels at helping clients across the zero-emission ecosystem accelerate adoption, including: identifying technology rollout plans, grant funding, technology procurement, LCFS credit management, marketing and customer engagement, and program management of large-scale ZEV pilot and deployment programs.

Our focus on identifying and overcoming large- and small-scale barriers to ZEV adoption has given us unique and extensive perspective into the opportunities and challenges facing the state of California as we move to a fully zero-emission transportation system. We share CARB's commitment to an effective rollout of zero-emission technologies throughout the commercial vehicle sector and appreciate the addition of exemption categories that better support early-year roll out. We appreciate the updates in the most recent language and workshops to account for various challenges, including: the Hired Fleet Verification requirements, and the inclusion of an Infrastructure Construction Delay process for all fleets, the CARB-hosted list for the ZEV Unavailability Exemption, the energy-based Daily Usage Exemption addition. However, as noted in our previous comment letters, we continue to see opportunities to efficiently manage early-year implementation challenges, while still enabling us to meet our critical long-term air quality and carbon targets.

**Infrastructure Delay Timelines**

The commercial fleet industry is increasingly realizing that the major limiting factor in adoption is not vehicles, but infrastructure. While we welcome the addition of a one-year delay for vehicle orders due to infrastructure delays, our experience on infrastructure projects indicates this will be insufficient to address and align vehicle deliveries with infrastructure availability. **Vehicle purchase delays should be based on project-specific timelines for fleets with in-progress infrastructure projects, including projects at owned sites, shared sites, and contracted-agreement retail sites.**

**Fleet scale infrastructure projects of 5+ MW take 3-5 years *in a best-case scenario*, meaning the initial 1/1/2025 deadlines are already an impossible target for most fleets, even with a one-year implementation delay.** Given that many fleets in California either lease their operating facilities or own facilities without appropriate power or layouts to support fleet-scale infrastructure, real estate

acquisition will add 1-2 years onto many infrastructure development and construction projects. The following chart underscores the scope of the compliance challenge. Even with a one-year, one-time, allowable compliance delay, fleets will not have real-world access to fleet-scale infrastructure for another 1.3-4.5 years beyond even that modified deadline.

	First compliance date (Milestone Group 1)	Infrastructure delay sunset	Infrastructure availability date (est)	Years w/out Infrastructure After Delay, i.e. Non-Compliance
<b>3-5 MW Owned Site Timelines</b>	1/1/2025	1/1/2026	3/31/2027	<b>1.3 years</b>
<b>5-10+ MW Owned Site Timelines</b>	1/1/2025	1/1/2026	6/30/2028	<b>2.5 years</b>
<b>5-10+ MW Real Estate Acquisition Plus Development Timelines</b>	1/1/2025	1/1/2026	6/30/2030	<b>4.5 years</b>

**Any fleet with validated progress on infrastructure projects, as demonstrated by for real estate, utilities, contractor agreements, or equipment orders, should be eligible for a delay based on individual project-specific timelines.** Real estate challenges for fleets and infrastructure project developers are substantial and can add an additional two years to already extensive timelines, especially in real-estate constrained California. Even in a best-case scenario, where fleets own their yards and already fuel onsite, existing lots may not have the physical footprint to accommodate fleet-scale charging, necessitating a new site search. In addition, a significant portion of the transportation industry relies on the flexibility of leases to meet changing customer needs, and external property owners have shown minimal appetite for onsite charging, even when fleets agrees to absorb the expense. GNA's recent survey of nine (9) commercial fleet clients with 430 truck facilities statewide showed that 54% of their facilities are currently leased, underscoring the scope of the impending real estate challenge in California for fleet electrification. Accordingly, the "delays beyond their control" should also include factors beyond the narrow scope of construction-specific delays, including real-estate acquisition, permitting, and supply chain delivery delays.

The following Gantt chart shows the real-world timelines associated with utility design and contracting, permitting, construction, and real estate acquisition based on larger-scale projects in California to-date. As noted by Black & Veatch, which has completed 40% of all U.S. high-power charging projects, grid/substation upgrades and connection times for 5+ MW projects take 24 months or longer, which must be added to the other required infrastructure development steps including electric demand profiles, utility contract, utility engineering and design, permitting, equipment ordering, and construction<sup>1</sup>. The schedules clearly demonstrate that **many fleets will face challenges meeting the first four deadlines of the ACF regulation**, despite having active and appropriate fleet-scale infrastructure development projects. Fleets making good-faith efforts to implement a complex energy transition plan with numerous unknowns should not be forced to buy vehicles they cannot charge or be categorized as non-compliant if they cannot meet the ACF compliance benchmarks.

---

<sup>1</sup> Black & Veatch, "10 Steps to Build Sustainable Electric Fleets: Optimal Charging Networks to Ensure Triple Bottom Line Benefits" 2022

## Advanced Clean Fleets Proposed Implementation Deadlines

### Alignment with Fleet-Scale Charging Infrastructure Project Development Timeline

	Q1 2023	Q2 2023	Q3 2023	Q4 2023	Q1 2024	Q2 2024	Q3 2024	Q4 2024	Q1 2025	Q2 2025	Q3 2025	Q4 2025	Q1 2026	Q2 2026	Q3 2026	Q4 2026	Q1 2027	Q1 2027	Q1 2027	Q1 2027	Q1 2028	Q2 2028	Q3 2028	Q4 2028	Q1 2029	Q1 2029	Q1 2029	Q1 2029	Q1 2030	Q2 2030		
3-5 MW Project Owned Site Development	ACF Rule Approval							1st ACF Deadline 10% Milestone Group 1								2nd ACF Deadline 10% Milestone Group 2				3rd ACF Deadline 25% Milestone Group 1								4th ACF Deadline 25% Milestone Group 2				
5-10+ MW Project Owned Site Development																																
5-10+ MW Project Real Estate Acquisition Plus Development																																

#### Legend:

ZE/Infrastructure Assessment, Including Initial Vehicle and Site Selection
Design and Project Scoping, Utility Approval, Finalize Design, Contracts, Permitting, Construction
Site Commissioning
Real Estate Acquisition

#### Infrastructure-Related Vehicle Delay Reporting Concept

Similar to the current ICT rule, GNA believes that ACF compliance could reasonably include a high-level infrastructure checklist document from each regulated fleet demonstrating their: turnover plans, real estate or retail vendor contract, vendor and utility contracts, permitting engagement, anticipated timelines, and project progress. These plans could be reviewed and verified by CARB. Fleets making progress on approved plans would be able to achieve “Interim Compliance” in any given year and to delay site-associated vehicle purchases, even if they haven’t yet been able to achieve the ultimate rollout targets of any particular year due to delays. This Interim Compliance would not put contracts and business arrangements at risk, and fleets would still be required to make continual progress on fleet-wide ZEV turnover.

CARB could further help align vehicle planning and infrastructure under this approach, which would minimize the potential capital impacts from misaligned purchase cycles or stranded vehicle assets. ZEVs cost hundreds of thousands of dollars apiece, and fleets cannot afford for capital to remain tied up in unused assets for months and years because ACF deployment deadlines don’t match infrastructure project timelines. Fleets with approved infrastructure plans could be allowed to make VIN-specific turnover and replacement decisions based on actual infrastructure availability.

#### **Grant-Funded Vehicles**

GNA’s grant writing supports many of the industry-leading deployments of battery- and hydrogen-powered heavy-duty vehicles, across all weight classes and vocational types. We have been involved in funding awards at every stage of the zero-emission market pipeline, from technology development, to pilot, early commercial, and now mid-sized rollouts. The clients who develop, test, iterate, and advance the entire zero-emission marketplace were only able to undertake these projects via grant-funded support from public agencies. These are the investments that advanced the entire zero-emission technology supply chain, and early adopters should not be penalized with the exclusion of pre-ACF grant-funded vehicles from counting towards ACF compliance.

We appreciate the revisions to the provision surrounding Vehicles Acquired with Incentive Funds; however, we believe that **additional clarity is needed that would ensure additional flexibility for fleets to utilize incentives in the run up to and early years of the regulation. Specifically, we recommend the following:**

- Grandfather in all incentive-funded vehicles received prior before January 1, 2024, as defined by the date of the “notice of proposed award,” to count for full and immediate compliance towards the milestone targets set by ACF.
- Consider delaying implementation of this provision, with a bi-annual review of market conditions between 2024-2030 to determine appropriate implementation timelines.

Battery electric vehicles still carry very significant economic risk for fleets: the technology has not yet reached full maturity and will not likely hit that mark prior to the 2024 vehicle purchases envisioned under ACF. For clients with additional complex body modifications, the costs can be 3x-4x the cost of conventionally fueled vehicles. Grants remain essential to helping to reduce – but not eliminate - upfront capital risk. And the market cannot advance and continue to commercialize at the levels envisioned under the 2024 regulatory targets without grant-supported deployments over the next several years.

CARB's ACF rule is a technology-accelerating rule that will rapidly change technology supply and demand dynamics. The combination of The Advanced Clean Truck (ACT) and Fleet (ACF) rules aim to achieve manufacturing targets and availability by 2024. This means CARB's assumptions themselves acknowledge there is not adequate availability or pricing during this current market ramp up period. Furthermore, initial assumptions around ACT commercialization timelines were also predicated on pre-pandemic supply-chain disruption assumptions, which have created delays and pricing increases throughout the commercial trucking industry, particularly for zero-emission technologies.

While we recognize that state agencies do not like to "pay for compliance" as a common practice, ACF is unlike any previous regulation. This rule is writing the framework for an entire energy transition, with risks, questions, and costs that we are all still working to identify. The market is still in an early, nascent stage, and the public-private partnerships enabled by grants remain necessary to advance the marketplace for everyone. Industry leaders should not be penalized for working with funding agencies to collaboratively build the zero-emission marketplace, and the removal of grant funds should align with lower real-world TCO economics.

### **CA Fleet Definition – Temporary Pass for Transitory Vehicles**

CARB's current draft language requires all vehicles that enter the state of California to be registered and counted as part of a fleet's total compliance obligation. In past diesel rules, registration in CARB's TRUCRS system was not required for vehicles meeting the engine model year standards, enabling broad flexibility for interstate fleets to operate in California with compliant diesel engines. In contrast, fleets utilizing either ACF compliance pathways will face significant limits and challenges managing non-California based vehicles that enter the state:

- Under the ZEV Addition Pathway, fleets will not be able to add new non-ZEV following January 1, 2024. This effectively means they **cannot add new interstate vehicles into California operations following January 1, 2024, until such time as zero-emission vehicles and infrastructure are suitable for long-haul operations.**
- For fleets complying via the ZEV Milestone Pathway, all vehicles on the California roadway must be registered in the ACF system and counted as part of the fleet calculations and targets. Vehicles cannot be removed from the ACF system during the calendar year in which they entered the state. This means even transitory interstate vehicles would be included in a fleet's total, thereby changing the denominator associated with fleet percentage turnover targets. This approach places an outsized burden for both compliance reporting and zero-emission turnover targets on interstate fleets, due to vehicles which are a) predominantly non-California vehicles and b) the least able to electrify for the near- and medium-term timelines based on mileage profiles and gaps in long-haul infrastructure across state lines. In addition, there is no clear removal mechanism for IRP vehicles that no longer operate in the state of California, leading to overcounting ACF operations.

While we understand the need to mitigate emissions from all vehicles operating on California's roads, interstate vehicles a) are not currently suited to zero-emissions, b) will already be registered and monitored under the Heavy-Duty Vehicle Inspection and Maintenance Program, and c) do not contribute a vehicles-worth of emissions on California's roads each year. **To focus ACF on the vehicles with more regular operations in California, we recommend that CARB modifies the existing temporary pass language from the Truck & Bus rule to allow one-time access to California roads each year, without the need to register in the CARB system or get pre-approvals. Vehicle operating for less than 10 days in the state of California per year, should not be counted as part of the California fleet.** This could be verified from GPS mileage data,

dispatch data, and other available records, that demonstrate a truck's short-term and transitory operations in the state of California.

### **Integrated Reporting Systems**

Given the scope and breadth of California's emission requirements and associated reporting systems, **GNA continues to request that CARB develop an integrated reporting system that accommodates data across all on-road rules.** Reporting the same VIN-specific data, odometer, sale information, and corporate information could be simplified and immediately verified and populated across regulation reporting systems including the ACF Reporting (High Priority and Drayage systems), HDVI/M reporting, TRU, and legacy Truck & Bus systems.

### **Conclusion**

Thank you again for the opportunity to comment on this rule and work with the entire team at CARB on zero-emission progress. This is the most ambitious and important fleet rulemaking in our lifetimes, and much depends on getting it right. While we can't afford to wait on zero-emissions, we also can't afford to get it wrong. We hope our experience implementing, iterating, and learning vital lessons, in partnership with clients, CARB, and agencies throughout California, can inform and improve details in the ACF language to better achieve this energy transition.

If you have any further questions on GNA's ZEV fleet implementation experience, we would be happy to host members of the CARB board and/or staff to discuss additional details. GNA and our clients are eager to provide insight that can help CARB prepare a successful and effective zero-emission pathway for the State of California.

Sincerely,

Rebecca Schenker  
Senior Director, Policy and Programs  
[Rebecca.schenker@gladstein.org](mailto:Rebecca.schenker@gladstein.org)