October 17th, 2022

Ms. Liane Randolph, Chair
California Air Resources Board
1001 I Street, Sacramento, California 95814

Via: Electronic Submittal

Subject: Transfer Flow, Inc.'s Public Comment Regarding CARB's Proposed Advanced Clean Fleets Regulation

Dear Chair Randolph and Board Members:

Transfer Flow, Inc. is pleased to offer our comments to the California Air Resources Board (CARB) regarding the potential Advanced Clean Fleets (ACF) regulation.

Transfer Flow has been in business in beautiful Northern California since 1983, manufacturing high-quality liquid fuel systems. In 2016, Transfer Flow received the small business of the year award from the California State Assembly.

Transfer Flow supports CARB's efforts to achieve deep, rapid emissions reductions from mobile sources. Unfortunately, CARB's blatant favoritism of battery-electric technologies to the detriment of renewable, sustainable, low-NOx, and carbon-negative liquid or gaseous fuels does not support the goal of immediate, near-term emissions reductions. To meet California's ambitious goal of carbon neutrality by mid-century, CARB must take a close look at the lifecycle carbon intensity of all resources and the opportunities for carbon-negative emissions.

Since CARB passed the Advanced Clean Cars II (ACCII) regulation, at least four states are dropping their 177 statuses; six states are adopting California's electric vehicle mandate, and seven other states are still undecided. North Caroline ripped out all their public EV charging stations[1] in response to California's EV mandate, and 17 other states are suing the EPA over

[1] https://www.caranddriver.com/news/a40543385/north-carolina-wants-remove-free-public-ev-chargers/

California's Clean Air Act exemption.[2] All this pushback is a result of CARB's unreasonable electric vehicle favoritism. Transfer Flow, Inc. would like to encourage CARB to work with the EPA to adopt a national set of harmonized standards, as CARB's responsibilities should be to regulate criteria pollutants and greenhouse gasses, not dictate to industry how to achieve those requirements and the pollutants should be evaluated from the cradle to the grave as well as the practicality of implementation of each available option.

Currently, there is a limited availability of HD ZEVs on the market, with only two manufacturers currently having an actual truck available on the market: BYD and Volvo. Volvo's HD ZEV has a limited 100-mile range making it impractical for many applications. All the other manufacturers are not actually available on the market yet. Last Friday, October 14th, 2022, the HD class 8 ZEV manufacturer Nikola pled guilty to defrauding investors by overstating their product capabilities and was fined a billion dollars.[3]

Even if heavy-duty battery-electric technologies were available, there is an insufficient charging infrastructure to support the mass deployment of battery-electric technologies. Just one week after CARB passed the Advanced Clean Cars II regulations, California's Independent System Operator had to ask electric vehicle owners NOT to charge their vehicles due to stress on the electric grid,[4] leaving the public baffled with how they were supposed to meet their transportation needs with an upcoming all-electric vehicle mandate and an electric grid that already cannot meet the needs of the state. In 2020 PG&E pled guilty to 84 counts of manslaughter for their lack of infrastructure maintenance causing the devastating Camp Fire that burnt down the town of Paradise, California. Citizens from areas affected by PG&E's negligence don't want electric vehicles, including truck drivers. If CARB wants a successful rollout of alternatively powered transportation, CARB would listen to stakeholders and allow for much more practical, near-zero technologies to be implemented.

Robert Armstrong, the director of the MIT Energy Initiative, expresses concerns with the limited number of locations around the world where the minerals needed to manufacture electric vehicle batteries are found.[5] 70% of the cobalt used in electric vehicle batteries comes from a single country, the Democratic Republic of the Congo. And 80 percent of the battery supply chain is owned by China. Given the escalating cold war between the U.S., Russia, and China, it is not a good idea for CARB to ramp up its dependence on China. The mining of the raw minerals needed to manufacture the battery packs for electric vehicles has been linked to many horrific

[2] https://www.courthousenews.com/17-states-sue-epa-for-restoring-californias-authority-to-regulate-vehicle-emissions/
[3] https://fortune.com/2022/10/14/nikola-founder-trevor-milton-convicted-fraud-misleading-investors/
[4] https://www.nytimes.com/2022/09/01/us/california-heat-wave-flex-alert-ac-ev-charging.html
[5] https://www.pbs.org/newshour/show/californias-move-to-ban-sales-of-new-gasoline-fueled-cars-could-spread-to-other-states

human rights violations.[6,7,8,9,10,11,12] Unfortunately, CARB has not considered any provisions for a battery directive, such as the UN has required setting sustainability requirements for batteries placed on the market including responsible sourcing of raw materials, hazardous substances, carbon footprint, and measures to improve the collection, treatment, and recycling of these waste batteries ensuring materials recovery. Many concerned citizens do not support the human rights violations associated with mining the cobalt, lithium, and other minerals required for battery manufacturing.

Near-zero technologies will be more agreeably adopted if consumers feel they have a choice of which near-zero technology works best for them. Not allowing a choice of which near-zero technology consumers choose to implement runs the risk of having the opposite intended effect. Liquid fuels have a strong heritage of radically improving quality of life, and this history is not going to erase itself overnight. Basing the performance of all liquid fuels on fossil fuels or even gasoline is a limiting perspective that undercuts the potential for creating and consuming biofuels locally by repurposing the waste created from California's rich agricultural resources.

Biogas provides the lowest carbon transportation fuel of any kind. According to the California Air Resources Board, biogas fuels from dairy waste and other organic waste are the only transportation fuels certified as carbon negative because they destroy methane and black carbon emissions while reducing the need for fossil fuels. Using biogas in heavy-duty trucks can also cut air pollution by more than 85 percent. Biogas can provide IMMEDIATE and significant relief in areas heavily impacted by air pollution and truck traffic.[13]

CARB is an unelected board, and as such, it is inappropriate for CARB to make such big decisions as electric vehicle mandates. A transition this big should be brought up and debated by the state legislature, if not by the U.S. Congress. When The CARB Board oversteps the appropriateness of its authority, it serves to undermine what CARB is trying to achieve. All these electric vehicle mandates are serving as a backstop to continue using petroleum-based fuels while the electric infrastructure is built up, which will take, by CARB's own account, at least ten years to achieve.

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[6] https://www.amnesty.org/en/latest/news/2019/03/amnesty-challenges-industry-leaders-to-clean-up-their-batteries/
[7] https://www.ft.com/content/c6909812-9ce4-11e9-9c06-a4640c9feebb
[8] https://www.theguardian.com/environment/2021/jan/03/child-labour-toxic-leaks-the-price-we-could-pay-for-a-greener-future
[9] https://www.nytimes.com/2021/05/06/business/lithium-mining-race.html
[10] https://www.washingtonpost.com/graphics/business/batteries/congo-cobalt-mining-for-lithium-ion-battery/
[11] https://therevelator.org/ev-batteries-seabed-mining/
[12] https://earthworks.org/resources/responsible-minerals-sourcing-for-renewable-energy/
[13] https://www.bioenergyca.org/policy/transportation-fuels/

In closing, Transfer Flow, Inc. would like to thank CARB for the opportunity to comment, and we look forward to being a productive part of positive change within the liquid fuels industry.

Sincerely,

Laurel Moorhead

Laurel Moorhead, E.I.T.
Regulatory Compliance Engineer