

December 21, 2022

California Air Resources Board
1001 I St.
Sacramento, CA 95814

RE: 3Degrees Comments in Response to November 2022 Public Workshop on Potential Future Changes to the LCFS Program

Dear Air Resources Board Staff,

Thank you for the opportunity to provide comments in response to the November 2022 Low Carbon Fuel Standard (LCFS) public workshop on potential amendments to program rules. 3Degrees Group Inc. (“3Degrees”) is a global climate and clean energy solutions provider and is a strong supporter of the LCFS program. We participate in the program as a designated reporting entity on behalf of a variety of opt-in parties with light-duty electric vehicle (EV) chargers, electric forklifts, hydrogen forklifts, and heavy-duty EV fleets. We are also an active fuel pathway developer.

3Degrees’ recommended topics for the forthcoming LCFS rulemaking are outlined below. These comments include topics of interest related to the workshop, as well as key priorities outlined in our previous comments. We have organized our comments in line with the slide numbers from the November 2022 workshop.

Slide 18: CATS Model Assumptions

Regarding the assumption that credit generation must exceed deficit generation on an annual basis as an input to the California Transportation Model (CATS), 3Degrees suggests that Staff instead consider implementing a constraint that the number of credits in the credit bank must remain above zero. As the credit bank currently stands significantly oversupplied with ~11.2 million credits, the program’s continued functioning does not require that generation exceed deficits in each year. Revising this assumption would be in line with our understanding of the intended design of the program and would lead to less constraints on the range of possible CI targets for 2030.

Slides 24-26: Carbon Intensity (CI) Reduction Target Scenario Design Options

3Degrees strongly supports ARB’s proposal to increase the CI reduction target to 35% by 2035 and 90% by 2045 (Alternative C). We believe that this level of stringency is most in line with the objectives of the recently adopted 2022 Scoping Plan. As the most mature program in the West, maximizing the CI reduction goal as much as is feasible will ensure that California remains a leader in the clean fuel policy space.

Slides 28-29: Crop-based Biofuels

3Degrees appreciates ARB Staff's willingness to engage and consider a wide range of perspectives on the issue of whether a limitation on crop-based biofuels should be incorporated into the revised LCFS rule. We also acknowledge that the potential adverse effects on land use from biofuels production are a serious concern.

At the same time, we believe that one of the greatest strengths of the LCFS is that it is technology neutral. Limiting participation by one category of fuels would negate this feature and set precedent that fuel categories could be narrowed in the future based on supply fluctuations, thus making the regulatory design overly reliant on market influence. Rather than pursuing targeted fuel restrictions, we recommend that ARB review the program rules to see if updates are needed that effectively mitigate adverse outcomes in a way that can be applied across fuel types. This provides more certainty and predictability in the program while also leading to the best environmental outcomes.

In line with this view, the program currently limits the level of crop-based biofuels participation by virtue of its escalating CI stringency. As the CI score declines, crop-based fuels will increasingly become deficit generators as a natural consequence of the program's current design. Increasing the stringency of the CI target, in line with our comments above, would expedite this outcome. If the current program design is viewed as ineffectively calculating the life cycle emissions of biofuels, we recommend ARB staff review the program design features (e.g. ILUC emissions factor).

Slides 30-31: Biomethane Crediting - Avoided Methane Credit

3Degrees recommends that no changes be made to the avoided methane credit opportunity in this near-term rulemaking (i.e. move forward with Alternative C). We recognize Staff's motivation to align with the SB 1383 methane capture requirement. However, we are concerned that phasing out the credit for avoided methane emissions would most likely result in the industry reverting to venting the methane unless and until a formal requirement is in place to capture methane, or another regulatory mechanism is in place to incentivize methane capture.

We recommend that any changes to crediting for avoided methane be based on capturing methane at dairy becoming a market norm and no longer meeting 'additionality' criteria. This could be due to sufficient alternative incentives existing, methane recovery becoming mandatory in more jurisdictions, or other factors that change the operational norms at dairy farms.

Slide 32: Biomethane Crediting - Book and Claim

Regarding the book-and-claim eligibility requirements for RNG, we understand the intention behind introducing a geographic boundary for RNG is to align with the restrictions on renewable electricity and create comparable rules for various fuels. However, the natural gas distribution system is fundamentally different from the power system and does not align with the boundaries

of the Western Electricity Coordination Council (WECC). From a credible claims perspective, national sourcing continues to be a logical geographic boundary. Once RNG enters a pipeline, it may essentially be delivered anywhere across the continent.

Further, we do not agree with the proposal to remove book-and-claim accounting of landfill gas entirely except for hydrogen production beginning in 2030. If a form of RNG is allowed under the program based on its CI score, then unique restrictions on the appropriate contractual arrangements goes against the fuel-neutral principle of the LCFS program. Book-and-claim accounting was recently expanded to electricity and is currently the market norm for RNG under the RFS and other regional CFS programs.

RNG is most commonly delivered to consumers via common carrier pipelines where it is indistinguishable from fossil-derived gas. Suppliers purchase gas either directly from producers via bilateral contracts or from “hubs” across the US. Underneath this web of contractual agreements, the pipeline system itself moves gas from supply to demand along the shortest physical distance. Even when transmission rights are reserved in an attempt to direct the flow of gas, physical constraints of the system (e.g. directional flow or shifting from areas of high supply to high demand) may result in the consumer receiving fuel from another project or provider. For these reasons, fuel transactions over a pipeline commonly use contractual instruments, such as RNG attributes delivered over tracking systems or via attestation, to allocate fuel attributes to the supply received by end users.

As noted above, 3Degrees believes that the LCFS program should remain fundamentally based on CI reductions, and any restrictions on book-and-claim accounting should be based on ensuring a credible chain-of-custody approach and not to limit individual fuel types. Therefore, we recommend that all North American RNG projects continue to remain eligible and that no restrictions on the end use of landfill gas be introduced (Alternative C).

Slide 35: Other Modeling Assumptions: Limiting Electric Forklifts

We are concerned that ARB is proposing to limit electric forklift participation in all proposed models. As noted in our July 2022 comments, we recommend that ARB establish a standardized framework for assessing if, when, and how any technology should be phased out of the LCFS program before considering moving forward with removing any individual technology from opt-in eligibility. It is critical that all technologies and fuels be held to a similar standard, and that ARB and LCFS stakeholders understand the implications any framework would have on other technologies, now or in the future.

As outlined in our July comments, in addition to establishing the “if” and “when” of potential technology phase-out, clear rules on “how” technologies will be phased out is important. The LCFS should provide an off-ramp or other provision geared at a smooth and predictable transition out of the program. These provisions ensure market certainty for ZEV manufacturers and market participants.

We would also note that disallowing credit generation for alternative fuels used in forklifts would essentially shift the baseline of the program as the deficit-generating fuels most commonly used in forklifts will continue to be regulated in the program.

We recommend alignment on designated reporting entities (“DRE”) across credit generation opportunities.

As discussed in our previous comments, we strongly urge CARB to align and streamline treatment of DREs across credit generation opportunities as part of the upcoming rulemaking process. There are currently fuel applications where DREs are not allowed, as well as circumstances under which DREs do not inherit the program treatment of the designator. We believe creating consistency across credit generation opportunities is in line with the underlying rationale of allowing DREs. Our August 2022 comments on this topic are restated below:

The entity with the first right to credits is meant to align with who is closest to the decision-making related to supplying low-carbon transportation fuels. These eligible credit generators can designate another entity to generate credits on their behalf in order to benefit from the program even if they do not have the resources to manage program participation themselves or might not otherwise be able to participate directly. DRE designation is particularly beneficial for smaller entities, including entities providing smaller volumes of credit-generating fuels.

Specifically, we have experience with ZEV infrastructure owners who have had challenges participating in the program due to the inability to designate a reporting entity. It is unclear why, under current rules, the owner of non-residential charging equipment can designate a third-party to generate credits if it is generating credits for non-residential ZEV fueling, but not to generate credits under the infrastructure provisions of the regulation. This dynamic means that a ZEV infrastructure owner cannot benefit from a designated reporting entity to support credit generation for ZEV fueling nor with lowering the CI of that fuel. A ZEV fueling station owner choosing to use a o-CI pathway for EV charging or low-CI pathway for green hydrogen would need to additionally manage an AFP account, a WREGIS account, and the application for the pathway, as well as quarterly REC procurement and retirement in accordance with LCFS rules and regulations. This disadvantages infrastructure owners and discourages full participation in the program, particularly for smaller or earlier-stage companies.

Across credit generation opportunities, 3Degrees recommends that ARB clarify that the credit generator is able to designate a DRE, and that this DRE inherits the priority and any other program treatment of the designator, e.g. allowing a DRE to assume first priority in generating incremental credits when designated by an LSE. We recommend that CARB implement this by creating a single section within the regulation that

discusses DREs, in line with recent proposed revisions to the Oregon Clean Fuels Program.

3Degrees appreciates this opportunity to provide feedback and we look forward to continuing to work with ARB on the success of the LCFS program. Please reach out with any questions or for further discussion.

Sincerely,

/s/ Maya Kelty

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