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Sacramento, CA 95814

August 5, 2022

Ms. Cheryl Laskowski, Chief
Transportation Fuels Branch
California Air Resources Board
Sacramento, CA 95814

Re: Public Workshop: Potential Changes to the Low Carbon Fuel Standard

Dear Ms. Laskowski:

Thank you for the opportunity to provide comments following the California Air Resources Board's ("CARB") recent workshops to discuss potential changes to the Low Carbon Fuel Standard ("LCFS") program. With an ambition to become a net zero company by 2050 or sooner, and to help the world get to net zero, bp is actively engaged in advocating for policies that support this ambition. We look forward to continuing this engagement as CARB looks at making changes to the LCFS, as well as our continued engagement on the development of the 2022 Scoping Plan update.

California's climate programs have created a model for other jurisdictions. We are actively engaged in this market, including our participation in the state's LCFS program through the production of lower carbon fuels. In addition, bp is a joint venture partner in LightSource bp, a solar company headquartered in San Francisco.

On behalf of bp, I would like to offer the following specific comments in response to the workshop presentation and associated comments and discussion.

Options for 2030 CI Adjustments

bp supports CARB's ambitious approach to 2030 target setting. This ambition should be underpinned by illustrative compliance scenarios that take into account the potential sources of carbon reduction available, including any potential limitations being considered for biofuel feedstock types. We would encourage CARB to underpin its ambitious target with greater diversification of credit generating opportunities within the program. There is a danger that an over reliance on ZEV generated credits could influence less ambitious target setting that leave biofuel options on the table. bp believes that there can be a greater role for biofuels in the energy transition, including but not limited to the adoption of book-and-claim for co-processed renewable diesel or Alternative Jet Fuel and expanding book-and-claim to Renewable Natural Gas for process energy to biofuel / refinery production facilities (as referenced in our December 7th, 2021comment letter[1]).

Considerations for Post-2030 CI Targets

While setting targets in advance helps to support investment decisions, those targets also need to be credible and underpinned by rigorous studies that map out the potential pathways to achieving the targets. While we recognize that targets are also intended to be technology forcing, California does not have the benefit of robust program relief mechanisms that are incorporated in the respective Oregon and Washington statutes for their Clean Fuel Programs, as such CARB will need to be more deliberate in its approach to target setting than if such mechanisms existed to support the California program.

[1] https://www.arb.ca.gov/lists/com-attach/122-lcfs-wkshp-dec21-ws-WjxUOwBvU2EBawBf.pdf

As mentioned earlier in our letter, bp recommends that CARB commissions illustrative compliance scenario studies for program expansion through 2030, and if considering post-2030 it is not unreasonable to extend this out to 2035. We believe that any target setting beyond 2035 would be better informed if it were to take place five years from now when there are more contemporaneous inputs available, that would also include biofuel feedstock availability by type.

Aligning LCFS Incentives

Medium- and Heavy-Duty ("MHD") ZEV Refueling Infrastructure

bp agrees that hydrogen is expected to play an important role in advancing decarbonization in hard-to-abate sectors such as heavy-duty transport, where electrification may not be technically feasible or too costly. Given hydrogen is likely to have a more dedicated role for MHD transport, with light-duty ("LD") expected to broadly transition to battery-electric powertrains, requiring LD compatibility at hydrogen refueling sites is likely to place an unnecessary technical and economic burden on sites. LD hydrogen refueling infrastructure utilization is expected to remain low with MHD potentially better served by dedicated sites.

It should be noted that until such time as electrification (either by battery or fuel cell) is adopted at scale, the most significant short-term reductions in transport life cycle GHG emissions can be achieved by decarbonizing ICE vehicles via the fuels they use, such as through biofuels.

Fuels and Vehicle Applications

Requiring Intrastate Fossil Jet Fuel in the LCFS

We support regulating fossil jet fuel in principle, but in practice this is likely to be extremely challenging to administer effectively at the state level. The tracking and reporting of intrastate jet fuel consumption would have to be the accountability of the end user as there is no line of sight for fuel suppliers to determine the proportion of jet fuel supplied that would incur deficit generation under the LCFS program.

In addition, given the relative costs for decarbonization of aviation versus ground transportation, it is highly likely that much of the compliance for a potential aviation carbon deficit would be generated through ground transportation credits and thus increase the burden on California motorists.

Given the above, bp recommends that CARB consider a more holistic approach to aviation sector decarbonization than attempting to force fit into the existing LCFS program.

Areas of Further Consideration

Crop-based Feedstocks for Biofuel Production

bp supports CARB's ongoing efforts to appropriately account for the impacts of land use change within the LCFS program. The work completed for the 2015 reauthorization should be kept alive through regular literature reviews and tracking of global land use data to determine when an update of factors should be completed. This work is essential to ensure the program delivers the expected GHG reductions.

bp believes the inclusion of indirect land use change ("ILUC ") factors in pathway modeling is an effective policy tool to balance the risks and benefits of crop-based biofuels. In the workshop presentation, CARB noted other programs have caps, however, these jurisdictions are necessarily net-importers of bio-feedstock and verify a fuel's sustainability characteristics via a different regulatory mechanism (certification via voluntary scheme). Additionally, these

caps have generally been legislated as part of broader policy packages, not as updates to environmental/GHG regulations. Some of the concerns around crop-based feedstock go beyond CARB's mandate.

For clarity, bp actively supports limits to the use of biofuel feedstocks with high ILUC risk, however, crop-derivation does not *necessarily* result in high ILUC impacts. Rather than focusing on crop-based limits, bp encourages CARB to continue to focus on rules that encourage innovation in agriculture and biofuel production technology to improve the GHG – and broader sustainability – profile of crop-based fuels. A scientifically robust set of rules should necessarily disincentivize high ILUC risk fuels whilst rewarding demonstrably sustainable fuels, whether crop-, waste-, or renewable electricity-derived.

For example, cover crops like carinata can offer additional feedstock without land use change impacts and can offer further GHG and environmental benefits such as restoring soil carbon, reduced fertilizer use, and protecting against soil erosion. These, and other technologies, continue to develop to enable net-positive crops and agricultural wastes to be used in sustainable bioenergy production.

Additionally, CARB should consider policies which prioritize the use of crop-based feedstocks in the hardest to abate sectors of transport. Aviation is a particular focus for bp, but there are also other sectors where options to electrify or use hydrogen may be less viable in the short term than bioenergy.

Public Feedback Requested on Equity in the LCFS

For the energy transition to be successful and develop at pace, it needs to support the workers and communities who currently depend on fossil fuels for their livelihoods and create buy-in and acceptance in communities where lower carbon energy solutions will be developed. We support policies that ensure the transition to low-carbon fuels promotes equity by benefiting low-income and disadvantaged communities and rural areas.

As California and CARB continue to lead the way in policy development to advance the energy transition, bp looks forward to working with you on potential changes to California's pioneering GHG reduction programs, including the LCFS.

Sincerely yours,

Michelle Orrock
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bp America Inc.