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SUBMITTED ELECTRONICALLY

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Industrial Strategies Division
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: Comments on the July 7, 2022, public workshop to discuss potential changes to the Low Carbon Fuel Standard (LCFS) Program

Dr. Laskowski:

Tesoro Refining & Marketing Company LLC, an indirect, wholly owned subsidiary of Marathon Petroleum Corporation, (collectively, MPC) appreciates the opportunity to provide comments on the California Air Resources Board's (CARB) July 7, 2022, public workshop to discuss Potential Changes to the LCFS Program.

MPC is a refiner and marketer of transportation fuels in the State of California and is investing in low carbon solutions to meet the energy demands of today and into the future. MPC's commitment to lower carbon solutions is reflected in the successful conversion of the Dickinson, North Dakota petroleum refinery and the planned conversion of the Martinez, California petroleum refinery into renewable fuel production facilities. Combined, these two facilities will produce up to 2.5 million gallons per day of renewable transportation fuels with a life-cycle carbon intensity that is approximately 50 percent less than petroleum-based fuels.

Governor Newsom, in his Executive Order N-79-20 and recent letter to CARB Board Chair Randolph[1], highlights the importance of projects like MPC's Martinez Renewable Fuels project to support California's transition goals while providing highly skilled union jobs.

The July 7, 2022, workshop introduced several significant potential changes to the LCFS program, including an increase to the reduction target for the 2030 carbon intensity (CI) benchmark, a cap on the use of crop-based feedstocks and the addition of intrastate petroleum jet fuel as a deficit generator.

[1] July 22, 2022, Governor Newsom letter to CARB Board Chair Randolph

MPC's recommendations on the potential changes introduced in the workshop are listed below. Additional discussion and support for these recommendations are provided in the subsequent sections.

1. MPC recommends CARB decrease the current 2026, 2027, 2028, and 2029 CI benchmarks linearly to reach 30 percent below the 2010 baseline in 2030.
2. MPC recommends CARB extend the post-2030 CI benchmarks to be no more than 60 percent below the 2010 baseline by 2045.
3. MPC recommends CARB not cap crop-based lipid feedstocks, rely on the CI benchmarks, and adopt the Argonne National Laboratory Feedstock Carbon Intensity Calculator (FD-CIC) 2021 to calculate a crop-based feedstocks CI.
4. MPC recommends the position holder of jet fuel in tanks at an airport be the First Fuel Reporting Entity.

The LCFS market signal must remain strong, to attract investments in renewable fuels, which will help California meet its goal to decarbonize the transportation sector.

MPC supports market-based programs that reduce the life-cycle CI of fuels within the transportation sector. The LCFS provides a market signal that promotes future investments to reduce greenhouse gas (GHG) emissions associated with the production of transportation fuels. Over the last two years, the LCFS market signal has weakened due to COVID-19's impacts on transportation fuel demand[2] and the growing surplus of LCFS credits. Combined, these effects have increased the LCFS credit bank to 9.4 million metric tons of credits as of the fourth quarter of 2021[3]. As investors evaluate the viability of future projects over multiple years, the need for a steady, predictable LCFS program cannot be understated.

Given expected further growth of renewable fuels over the next several years, MPC sees room in the program for CI benchmark reductions prior to 2030, and recommends CARB decrease the current 2026, 2027, 2028, and 2029 CI benchmarks linearly to reach 30 percent below the 2010 baseline in 2030. These changes will help provide a steady, predictable program resulting in greater emission reductions sooner.

The targets CARB sets post-2030 must continue to allow for all transportation fuel suppliers to compete in a low carbon future that protects consumer choice while incentivizing technologies that reduce those fuels' life-cycle GHG emissions. Although CARB has pointed to the need to support fueling infrastructure and zero emission vehicles as the key driver for the post-2030 CI benchmarks, CARB must consider the scale of infrastructure requirements to achieve these ends. The draft 2022 Scoping Plan discusses the need to install nearly 7 gigawatts of new electrical infrastructure annually to deliver electricity to the transportation, industrial, and building sectors by 2045, an amount more than double what has ever been accomplished in a single year. MPC appreciates CARB "considering the need to balance a long-term market signal with uncertainty in

[2] California Energy Commission, December 2020 Petroleum Watch, graphic "California Refinery Production"
[3] CRB LCFS Quarterly data report 4Q21

modeling inputs"[4] and for reasons like the uncertainty in the pace of the electrical infrastructure buildout, recommends any post-2030 target be aligned with the average growth trend of the alternative fuel mix[5] since 2011. This trend indicates a 60 percent CI benchmark reduction by 2045 should be considered extremely ambitious. CARB could then review technology adoption rates, energy reliability, security, and costs to inform future changes to the CI benchmarks during post-2030 rulemakings.

The transportation sector needs more drop-in liquid fuel solutions. Capping the use of crop-based feedstocks in the LCFS will slow or prevent progress.

MPC does not see a reason for a cap or limit in the LCFS that restricts the use of crop-based feedstocks. Capping crop-based feedstocks sends the wrong signal and will slow innovation in the agricultural sector. CARB should instead consider program changes to incentivize the use of sustainable crop-based feedstocks to produce transportation fuels and rely on the CI benchmarks to signal which feedstock-fuel combinations will deliver the intended emission reductions.

Crop-based feedstocks may be produced sustainably through the utilization of techniques that have been shown to enhance soil fertility, reduce fertilizer use, and increase soil organic carbon levels[6], reducing emissions from crop production. Farmers are increasingly using techniques that reduce agricultural emissions. A recently published USDA report indicates that one such practice, the use of cover crops, increased by 50 percent from 2012 to 2017[7], noting soil health and environmental benefit as the driver. In addition, research and the development of new cover crops like camelina and pennycress have the potential to also provide plant oil feedstocks for renewable diesel production, increasing crop-based feedstock production per planted acre of land while promoting soil health and carbon sequestration.[8]

Land use and its potential impacts on the environment as the world population grows and economies expand are important considerations for policy makers. While the federal Renewable Fuel Standard (RFS) and LCFS are separate policies, crop-based feedstocks are used in each program, and the data EPA has collected on its program informs the broader impact crop-based feedstocks have had on land use. To date, all indications are that agricultural land use acreage has decreased, not increased.

Many factors like weather, yield, and geopolitical developments will influence the supply and demand for a given commodity over time. As an example of the response to the supply and demand

[4] CARB July 7, 2022, LCFS Workshop page 13
[5] CARB LCFS Reporting Tool Quarterly Summaries
[6] E.g., Koudahe et al. 2022. Critical review of the impact of cover crops on soil properties
[7] US Department of Agriculture 2021. Cover crop trends, programs, and practices in the United States
[8] *See e.g.*, USDA research project, Optimizing Oilseed and Alternative Grain Crops: Innovative Production Systems and Agroecosystem Services, *available at* https://www.ars.usda.gov/research/project?accnNo=437622&fy=2021; see also, USDA research project, Oilseed Pennycress – A New Cash Cover-Crop for the Midwest, *available at* https://www.ars.usda.gov/research/project/?accnNo=437301.

balance, the yield[9] for soybeans per planted acre in the U.S. has increased and reached a record high of 51.4 bushels per acre in 2021[10]. This is an important data point considering the U.S. agricultural acreage has decreased since the RFS program's inception, staying below the 402 million acres baseline the RFS monitors to protect against adverse land use changes resulting from converting agricultural feedstocks into fuel.

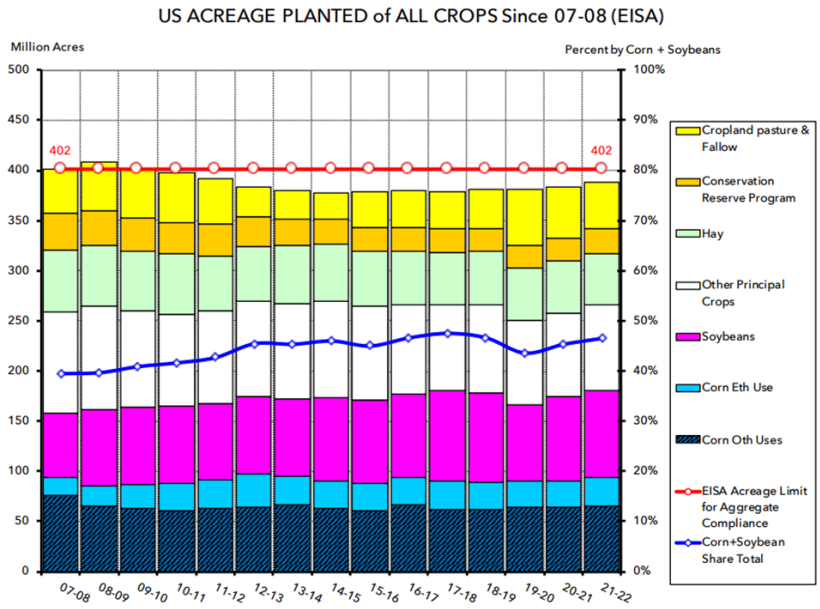

Figure produced and provided by PRX, utilizing data from the USDA and EPA

Each of these trends illustrate measurable developments while offering techniques and technologies that help reduce emissions from the agricultural sector. These practices will continue and be expanded if support is provided to the farmers employing them.

While other policies and jurisdictions, like the RFS and E.U. Renewable Energy Directive II (REDII) have placed caps and limits on the use of crop-based feedstocks as highlighted in the July 7, 2022, workshop[11], CARB does not need to follow this approach. The LCFS is not like the RFS or the REDII, rather it is a declining CI benchmark that all of California's transportation fuels meet in aggregate. This difference encourages innovation and emission reductions throughout the entire fuel supply chain.

California needs solutions like crop-based feedstocks that will deliver emission reductions in the transportation sector both today and into the future. MPC recommends CARB deliver these reductions not by relying on a cap on crop-based feedstocks, but by utilizing the annual CI benchmarks to drive emission reductions. To incentivize the use of sustainable feedstocks in the production of biofuels, CARB should adopt the Argonne National Lab Feedstock Carbon Intensity

[9] USDA Soybean Crush Report. Oil yield per pound (lb.) of bushel is 20%. 1 bushel of soybean is 60 lb.
[10] USDA National Agricultural Statistics Service
[11] *Supra.* page 35

Calculator (FD-CIC)[12] feedstock model into its current version of GREET. The adoption of the FD-CIC will proliferate the use of climate-smart agricultural practices in the U.S. and not just shift those existing climate-smart produced feedstocks to California, supporting the exportability of the program to other regions.

Adding intrastate jet fuel as an obligated fuel is a challenging proposal.

California's jet fuel supply chain is complex and relies on both in-state production and imports to meet demand. Once the fuel enters the supply chain, it is transported by pipeline or truck to bulk fuel storage terminals located inside or outside airport facilities. As an in-state jet fuel producer, MPC does not know if the jet fuel it produces is used for intrastate, interstate, or international flights after it is sold or transferred to a customer. As such, assigning the LCFS obligation to a producer of jet fuel would require significant changes in the way that jet fuel is marketed, distributed, and stored, possibly requiring segregation of intrastate jet fuel from all other jet fuel from the point of production to the airplane. This segregation would create unnecessary burden and cost.

Instead, if CARB intends to add intrastate jet fuel as an obligated fuel within the LCFS, MPC recommends CARB assign the position holder of jet fuel in tanks at airports as the First Fuel Reporting Entity[13]. The position holder of jet fuel at an airport is the closest entity to the end-user of the fuel and is in the best position to document and verify the quantity supplied for intrastate use.

If you have any questions about anything discussed here, feel free to reach out to me at bcmcdonald@marathonpetroleum.com

Sincerely,

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[12] Argonne National Laboratory. FD-CIC 2021
[13] CARB LCFS Regulation effective July 2020