American Lung Association of California • Climate Parents
Coalition for Clean Air • Environmental Defense Fund • National Wildlife Federation
Natural Resources Defense Council • The Nature Conservancy • Union of Concerned Scientists

April 11, 2014

Richard Corey, Executive Officer
California Air Resources Board
Headquarters Building
1001 "I" Street
P.O. Box 2815
Sacramento, CA 95812

Dear Mr. Corey,

The coalition of environmental, health, and scientific advocacy organizations thanks the California Air Resources Board (ARB) for this opportunity to comment on concepts discussed at the March 11, 2014 LCFS Workshops.

We recognize and thank staff and management for their critical, hard work implementing AB32. At a time when the Intergovernmental Panel on Climate Change has confirmed climate change is affecting every continent and has sounded the alarm bell on the urgent need to protect populations from the worst impacts, ARB remains an example to the nation and the world demonstrating that we can tackle these challenges pragmatically and effectively. Our coalition supports your continued strong, steady leadership on AB32 and the Low Carbon Fuel Standard.

1 We support ARB maintaining and readopting a strong LCFS regulation.

The LCFS is a critical component of AB32, California's Global Warming Solutions Act of 2006, representing one of the state's largest, greenhouse gas (GHG) emission reduction measures. The program is establishing a direct, long-term regulatory structure to transform our fuel supply to enable California's 2050 climate goals to be met. In order to meet these goals, the LCFS must remain strong now and be enhanced in the post-2020 time period to:

(1) enable a switch from petroleum to sustainable, ultra-low carbon fuels
(2) ensure continued reductions from all existing fuels, and
(3) protect against petroleum-based fuels getting even dirtier over time.

ARB's regulatory revisions in this round should build upon years of accumulated experience under the program and should focus on both continuing progress to achieve the current LCFS target of a 10% reduction by 2020 and establishing stronger signals post-2020 to continue ramping up incentives for clean, low carbon fuels. As laid out in the draft Scoping Plan update, California's efforts in the near term to establish a strong market for clean, low carbon fuels are

critical to make sure the state is on the pathway to the deeper reductions needed to meet the 2050 goals. Establishing strong signals now for the post-2020 time frame is a key part of this transformation process.

We also urge ARB to resist the oil industry's attempt to eliminate or weaken AB32 fuel programs in California. As the industry continues to fight climate policies in other states, nationally, and internationally, ARB must send a strong signal that California will not jeopardize the future health and environment of our state and planet on the backs of preserving the oil industry's status quo. As Oregon, Washington and other jurisdictions look to adopt and implement similar clean fuel standards, it will be critical that ARB continue to build on this transformational policy by maintaining a strong, long-term signal and improving it in the areas identified in this letter.

2 We ask ARB to move to an individual refinery approach to account for backsliding – and improvements – in petroleum gasoline or diesel performance.

Over the course of the last six years, CARB has made significant strides to improve the science of lifecycle carbon accounting for most fuel types. Within this effort has been an improvement of the understanding of each step in the fuel production and delivery process. Because the LCFS accounts for emissions from each step of the process in bringing the fuels to market, it should not only promote the use of the lowest carbon fuels overall, it should also encourage improvements in the production of traditional fossil fuels while also accounting for emissions increases that occur in fossil fuel pathways. As discussed at the recent workshop on the subject, we therefore support CARB improving the LCFS by accounting for the refinery's (1) emissions performance on a facility basis and 2) all upstream emissions associated with the facility, including crude oil extraction.

Many communities and local citizens, environmental, and health-based groups throughout California are concerned about the expanded use of higher-carbon, dirtier crude oils. Many of these inputs not only have higher GHG emissions, but add to local air pollution. The increasing use of higher-carbon intensity crude oils has already undermined some of the real progress California has made in reducing GHG emissions under the LCFS since its inception in 2006.

Against the backdrop of changes in crude type coming to California, ARB has discussed modifying the LCFS to properly account for and protect against worsening performance – or backsliding – in gasoline and diesel due to increases in crude oil production or petroleum refining emissions. At present, ARB currently accounts for increases in crude oil production only and averages any backsliding across the entire industry. We agree with ARB on the importance of recognizing and documenting increases in emissions. However, we request ARB move to a refinery specific accounting approach that more accurately and directly accounts for emission increases from crude oil production and refining emissions. ARB already has the GHG Mandatory Reporting Rule to help monitor and enforce this provision. These improvements are

consistent with the directives of the Board as well as the goals of (1) accurate lifecycle accounting, (2) ensuring the LCFS reductions and benefits are not offset, and (3) sending a more fair and direct, as opposed to diffuse, market signal to ensure refineries and crude oil producers to not worsen their carbon-intensity performance over time.

On December 16, 2011, the Board passed Resolution 11-39 recognizing that a fairer and more direct approach would be to have individual refineries account for their own emissions as opposed to averaging increases across the entire industry. The Board directed management and staff to create an option for individual regulated parties to have emissions determined on a refinery-specific basis. Staff's current proposal is to provide this option just one time and for just some, but not all, refineries. We ask that ARB to follow the intent and spirit of the Board's directive by ensuring the option is available for all refineries on a periodic basis.

To meet our long-term climate goals, we need to ensure that we simultaneously move to ultra-low carbon fuels *while* preventing current petroleum-based fuels from becoming even dirtier over time. The accounting mechanism for petroleum is a key element of a strong LCFS.

3 When coupled with the individual refinery accounting approach, we support the LCFS accounting for investments at refineries and crude oil production facilities that result in additional, permanent and verifiable GHG emission reductions.

Approximately 94% of California's fuel supply is petroleum based. We need to be cleaning up existing supplies while transitioning to ultra-low carbon fuels. If ARB ensures proper accounting for backsliding in gasoline or diesel (as noted above), we support the LCFS also accounting for the carbon emission reductions resulting from direct capital investments in innovative technologies at refineries and crude oil production facilities.

Refineries and crude oil production facilities have many opportunities to invest in cleaner technologies. They can make energy efficiency improvements and switch to renewable feedstocks and energy inputs, among many other pathways. Crediting such refinery investments is analogous to the crediting of improvements by alternative fuel producers who reduce their carbon-intensity under the LCFS "Method 2" process for new fuel pathways. This type of crediting could spur investment and reduce production emissions that harm the health of residents living in communities located in close proximity to refineries.

ARB should establish guidelines for the types of projects that would be credited. Before ARB awards credits, refiners should have to demonstrate that reductions are real, additional, permanent, and verifiable – with the data submissions and enforcement provisions comparable to current requirements for alternative fuel producers. Credits should not be provided for maintenance projects (such as tightening leaky valves) undertaken as normal industry operating procedure. Nor should credits be awarded for merely shifting to lighter crude oils that reflect current "price advantaged" crude oils but not direct investments to permanently reduce carbon

emissions. Finally, as a fuels standard based on lifecycle accounting, LCFS credits should be limited to direct reductions at the production facilities themselves. For example, credits for reductions associated with projects that occur outside of the fuel pathway, as some oil companies have asked for, should not be seen as substitutes for investing in actual carbon mitigation technologies in the fuels sector.

4 We ask ARB to ensure balance in updating indirect land use values by explicitly identifying and assessing the large factors that may either *increase* or *decrease* the impacts.

The indirect land use change (ILUC) session was an impressive demonstration of the hard work ARB staff together with the large team of outside experts have undertaken to ensure California's regulations are based on sound and up-to-date science. The work is not yet done, and in particular it is critical to ensure that the GTAP model is updated to reflect the latest work on water scarcity before new ILUC numbers are finalized. Recent analysis suggests an accurate accounting for irrigated land would increase ILUC emissions of corn by 27.5%.

We think ARB was entirely correct to consider a sophisticated statistical treatment of the impact of assumptions and parameter choices, rather than relying on the judgment of a single expert or study. While we have great respect for the work that Professor Tyner and his colleagues at Purdue have done on the GTAP model, the ILUC results reflect the work of many researchers, and the final decisions are ARB's. The approach ARB has taken with respect to controversial or uncertain parameters seems sensible and prudent.

We have not had a chance to review the updated soy biodiesel model and results in detail yet to understand how the treatment of linked markets for soy and palm oil are treated. It is our long-standing concern that expanded production of soy biodiesel may show up primarily through expanded demand for palm oil. Understanding how GTAP is treating this linkage, what land is being brought into production by palm expansion and the associated emissions from peat are critical to ensure accurate treatment of vegetable oil based biodiesel.

Finally, we were disappointed that ARB did not include any discussion of the impact of biofuel expansion on food consumption. We recognize that the LCFS -- unlike other biofuels policies in the European Union and the Federal government -- is not a mandate for larger volumes of food-based fuels, and that quantity of demand for ethanol is largely independent of LCFS credits. However, we encourage ARB to be transparent about the extent to which different biofuel feedstocks impact food consumption, and to provide policymakers the opportunity to make an informed policy judgment about whether to include compliance credits for what is, in essence, lost food consumption. Excluding lost food consumption from generating compliance credits would provide a meaningfully larger market signal for producers of biofuel to use feedstocks that minimize food competition, which will speed the development of non-food based fuels.

Some experts have mistakenly or unintentionally suggested that improving the ILUC analysis is synonymous with lowering the land use change emissions for corn ethanol. This conclusion rests on a biased and incomplete understanding of the recent literature. Some changes will indeed lead to lower projected emissions, while others lead to higher emissions. Recent GTAP analysis by Taheripour, Hertel and Liu suggests that the impact of reduced food consumption and irrigation constraints taken together lead to indirect land use emissions for corn ethanol about 60% higher than if these factors are ignored.[1] It's important for ARB to consider all meaningful improvements to their analysis, not just those that lead to lower land use emissions projections.

5 We strongly urge ARB to implement sustainability provisions for the LCFS.

We strongly support the efforts of ARB staff to develop and implement sustainability provisions for the LCFS, which are critical in order to realize the full environmental benefits of the program and for creating a long-term, durable, and credible policy. As you know, several of the groups participating in the Sustainability Work Group have recommended that the sustainability provisions should be at the level of the Roundtable on Sustainable Biomaterials or better.

Internationally, a large number of biofuel producers, biomass producers, commercial purchasers, government agencies, academics, and NGOs have recognized the need for and value of sustainability certification.

Biofuels have tremendous potential to reduce carbon emissions and protect environmental values if developed with caution and appropriate safeguards. However, in the absence of safeguards, biofuels can be produced in the wrong manner raising important questions about the long-term sustainability of the industry. We have worked in good-faith over the past four years with ARB and the Board toward sustainability provisions that help protect against potential negative impacts, such as increases in GHG that can occur if deforestation of native forests occurs for energy crops, loss of critical habitat and biodiversity, increased water consumption, and reduced food security -- impacts which pose significant risks to the environment and communities. ARB's Sustainability Work Group has made significant progress in developing a science-based definition of sustainability and the specific provisions to be included in the LCFS regulation. It is critical to the overall credibility and durability of the LCFS that ARB staff complete this work and formally incorporate these provisions into regulation.

[1] http://web.ics.purdue.edu/~hertel/data/uploads/publications/taheripour-hertel-liu-water-and-biofuels.pdf

6 We ask ARB to update its guidance on minimizing and reducing community impacts for new fuel production facilities in California.

Communities located near fuel production facilities in California can be affected by the fuel production process, itself, and by transportation of fuels and feedstocks to and from the facility. In order to increase community understanding and education about such facilities while maximizing the health benefits of the LCFS, ARB should update its community impacts guidance. The 2011 "Air Quality Guidance for Siting Biorefineries in California" document and listing of biofuel production facilities should identify and reflect the latest in technologies, operational requirements, and siting considerations to reduce emissions and potential health impacts on local communities. The guidance should include discussion of new cumulative impact screening tools such as CalEPA's CalEnviroscreen to inform local air district permitting processes with the latest data on disadvantaged communities. The guidance should also include public outreach and engagement strategies.

7 We support a cost containment mechanism that provides greater program certainty and a stronger signal for investments in low-CI fuels.

A variety of cost-containment mechanisms (CCM) built in to the existing regulation, such as credit trading and the life-long use of credits, are helping ensure market stability in the current program. With new pathways constantly being adopted, additional compliance options provide even more market stability. Some parties, including many serving on the LCFS Advisory Panel in 2011 as well as the UC Davis Expert Review Panel in 2013, suggested a CCM may provide more price certainty and make the program more resilient in the face of credit price or fuel cost concerns.

We agree with a broad array of stakeholders that adoption of a well-designed CCM can result in a greater investment certainty and a more robust, resilient program. It can also put to rest extreme cost claims by the oil companies. We also have heard from alternative fuel producers, who are interested in starting new low-carbon fuel projects, that a "price floor" would be very valuable to addressing uncertainty with the LCFS credit value going forward.

We support ARB moving forward with a well-designed CCM that 1) ensures all LCFS credits have been purchased by regulated parties, 2) provides long-term compliance certainty to parties, and 3) stimulates further investments in low-carbon fuels that reduce GHG emissions. We also support ARB considering potential mechanisms that could result in greater certainty, potentially through a price floor mechanism.

8 We support crediting for electricity used in non-road vehicles

Adding transportation fuels that are not currently counted in the program, such as electricity used in forklifts, trains, trolleys, and other non-road equipment, would make the LCFS more comprehensive and true to its stated goals. We support ARB accounting for electricity from

non-road vehicles, which will result in co-benefits including decreased criteria pollution reduction and incenting the cleanest technologies for goods movement, transit, and rail.

Thank you for your continued efforts in cleaning up the transportation sector and working on this historic, first-of-kind program. We look forward to following-up directly and future engagements.

Sincerely,

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