BP America, Inc

Ralph J. Moran
1201 K Street, Suite 1990
Sacramento, CA 95814
(916) 554-4504

DATE: March 11, 2011

Via Email and Electronic Submittal
Michelle Buffington
Air Pollution Specialist
Stationary Source Division
California Air Resources Board

Richard Corey
Division Chief
Stationary Source Division
California Air Resources Board

Re: Low Carbon Fuel Standard
Advisory Panel Priorities

Dear Michelle and Richard:

Per your recent request, BP America, Inc. submits our priorities to help guide the work of the LCFS Advisory Panel. Our three priorities are:

1) Re-evaluation of the benefits and wisdom of crude oil differentiation (areas 8, 11, 12)
2) Re-evaluation of the cost and feasibility of reaching the LCFS targets (areas 6, 7, 8)
3) Consideration of cost control mechanisms for the LCFS (areas 7, 8)

These priorities are detailed below.

1) Treatment of Crude Oil in the LCFS
The LCFS Advisory Panel provides a valuable and necessary opportunity to step back and re-evaluate the benefits and wisdom of attempting to differentiate crude oils in the LCFS. BP has strongly argued against the differentiation of crude oil (high carbon intensity crude oil or otherwise), because we believe there is not a reasonable, accurate way to distinguish crude oils and because even if there were such a way, there is no environmental, GHG or innovation benefit to doing so. Regarding the first point, we

believe this is demonstrated, in part, by the fact that we are in year two of the LCFS and staff still has not determined a way to distinguish high carbon intensity crude oils. This, despite the fact that thousands of staff hours have been devoted to this subject – diverting focus from other important parts of the regulation. Most importantly, we believe that it can be definitively demonstrated that there is no benefit to any conceivable or reasonable goal of a LCFS from differentiating crude oils. We would like CARB and the Advisory Panel to consider and analyze the following questions:

- Does the differentiation of crude oil in the California LCFS result in a meaningful increase in the volumes of low carbon fuel used in the state?
- Does the differentiation of crude oil in the California LCFS result in meaningful incremental incentive for innovation in low carbon fuels?
- Will the differentiation of crude oil in the California LCFS result in net global GHG reduction?
- Will the differentiation of crude oil in the California LCFS effect what crude is produced globally?

We believe it can be demonstrated that the answer to all of these questions is – no. Further, we believe it can be demonstrated that the likelihood is that differentiation of crude oil in the California LCFS will result in *higher* global GHG emissions.

2) Re-evaluation of the Cost of the LCFS
CARB's economic analysis, and general view of the feasibility of the LCFS, are based on an optimistic view that a robust advanced biofuels industry would exist early in the LCFS program – bringing large volumes of low cost, low carbon biofuels – such as cellulosic ethanol.

Conclusions from the 3/5/09 Staff Report include:

"Staff estimated that the displacement of petroleum-based fuels with lower-carbon intensity fuels will result in an overall savings in the State, as much as $11 billion from 2010 -2020. These savings may be realized by the biofuel producers as profit, or some of the savings may be passed on to the consumers. Should the savings be entirely passed on to consumers, it would represent less than three percent of the total cost of a typical gallon of transportation fuel ($0 - $0.08/gal)" (p.239).

"For the five gasoline analyses, the cumulative net cost effectiveness ranged from ($121) to ($142)/MT CO2E reduced, which, for the period of 2010 – 2020, is a cumulative savings of $8 to $9 billion" (p.272).

In addition to being a regulated party under the LCFS, BP is a major investor in cellulosic ethanol. We have aggressive plans to scale up commercial production, but can not model a scenario where sufficient volumes of low carbon biofuels exist to meet the 2020 LCFS target. Though the work of BP and others continues, it is becoming clear that the emergence of large volumes of low cost, low carbon biofuels envisioned by CARB has not occurred – and many not occur for several years. Further evidence of the delay of

these low cost alternative fuels include the recent dramatic reduction in the 2011 cellulosic ethanol requirement for the federal RFS2 (from 250MM gallons to 6 million gallons), recent studies which conclude that initial production cost estimates for cellulosic ethanol were significantly underestimated, and early cost data on available lower carbon ethanols which suggest a carbon price some $150/MT CO2E *higher* than CARB estimates.

A delay in the emergence of low cost, low carbon biofuels (and other alternative fuels) has significant implications for the LCFS – from both a cost and feasibility perspective. We urge CARB and the Advisory Panel to re-evaluate the cost and feasibility of the LCFS in order to enable and inform further discussions/decisions on necessary revisions to the regulation.

3) Consideration of Cost Control Measures for the LCFS
By all accounts, the goal of the LCFS is an ambitious one. Reaching the ambitious compliance target of the LCFS will require use of fuels and technology that do not currently exist. There are different estimates of the cost and impact of the LCFS. What is clear is that all these cost estimates contain a high degree of uncertainty because they contain important and uncertain assumptions about the development of technology and the scale-up of production and distribution of new, low carbon fuels. In some cases new vehicles and fueling infrastructure will also be required.

Though important and promising technological development in the production of cellulosic ethanol continues, there remains great uncertainty as to when the necessary breakthroughs will be commercialized and when/whether production will be sufficient to meet the compliance requirements of the LCFS and RFS2.

As of 2011, there are no appreciable volumes of cellulosic ethanol commercially available. BP is building what may be the first commercial scale cellulosic facility and is anticipating production starting in 2013. It is clear that without sufficient volumes of advanced, low carbon biofuels such as cellulosic ethanol, the 2020 goals of the LCFS cannot be met. In fact, it becomes difficult to envision LCFS compliance as soon as 2015 (a mere 4 years away) without the emergence of large volumes of cellulosic ethanol.

Currently, aside from the potential for future trading of LCFS credits, the LCFS contains no cost control measures and no defined process for determining when a problem exists and how that problem would be addressed. The absence of these processes and design elements create great uncertainty and risk for obligated parties and alternative fuel investors alike. The regulation does require reviews of the regulation in 2011 and 2014, although the emergence of compliance problems will not be confined to these years.

The planned California cap and trade program, for instance, contains multiple cost control mechanisms including what is expected to be active trading, use of offsets and an Allowance Price Containment Reserve. The LCFS is a much more limited and narrow market and yet contains no cost control measures. The uncertainty of CARB's cost estimates for the LCFS, and well as early indications that CARB's initial economic

analysis may significantly underestimate the cost of the LCFS – necessitate the re-evaluation of the need for cost control measures. For the benefit of consumers, investors, regulated parties and other stakeholders, there needs to be a transparent, defined process for determining when problems in LCFS compliance exist and what will be done to address the problem.

I look forward to working with you on these and other important issues through our participation on the LCFS Advisory Panel.

Sincerely,

Ralph J. Moran
BP America, Inc

Cc: Mary Nichols
Bob Fletcher
Virgil Welch