

May 6, 2011

Richard Corey  
Michelle Buffington  
Co-Chairs, LCFS Program Review Advisory Panel  
California Air Resources Board  
1001 "I" Street  
Sacramento, California 95814

Dear Mr. Corey and Ms. Buffington,

Thank you for the opportunity to provide further comments in regard to the issues discussed during the April 26 meeting of the LCFS advisory panel. This letter offers RFA's remarks on two areas: 1) the draft work plan; and 2) the outline for ultralow carbon fuels.

#### **COMMENTS ON DRAFT WORK PLAN**

In general, we believe the draft work plan provides a reasonable outline for the staff and panel to assess the 13 topics identified in the regulation. However, as detailed below, we believe several refinements to the draft work plan are needed.

1. **Topic 1 – Progress Against Targets:** Several members of the advisory panel suggested that the evaluation of the LCFS program's progress against carbon intensity (CI) reduction targets should extend well beyond whether compliance will be achieved in 2011. RFA strongly agrees. We recommend that any examination of progress against targets should include both a short-term view of compliance with targets based on available data from the LRT, as well as a mid-term evaluation of projected compliance based on the best available information on the likely availability of each alternative fuel by pathway. For the purposes of this review, RFA believes the evaluation should encompass the years of 2011-2015. Accordingly, we recommend the following revision to the fifth bullet point under this topic (strikethrough indicates deletion; underline indicates addition):
  - With the current data, are we tentatively projecting that regulated parties will meet ~~the 0.25% CI reduction target for 2011~~ the CI reduction targets for 2011-2015?
2. **Topic 3 – Lifecycle Assessment:** Lifecycle analysis serves as the very foundation of the LCFS regulation. As noted by several panelists, the field of lifecycle analysis is rapidly evolving and changing. By designing a regulation that relies entirely on lifecycle analysis and CI values for credit/deficit generation and determinations of compliance, ARB has necessarily obligated itself to ensuring new data and advancements in lifecycle analysis are integrated into the program in a timely manner. At the April 26 meeting, one panel member expressed that, in order to preserve "certainty" in the marketplace, CI values should not be allowed to change regularly to reflect advances in the science and new data. While RFA is sensitive to this concern, we strongly disagree. ARB adopted the LCFS knowing that changes in CI scores and advancements in lifecycle analysis would occur. Accordingly, ARB committed to using the "best available science" to determine CI values. Therefore, the

agency needs to establish a transparent and straightforward process that balances the desire for market certainty with the need for timely integration of advancements in lifecycle analysis and changes to default CI scores. Ignoring advancements in the science will only put the LCFS program's CI scoring framework years behind reality. We recommend the addition of a question to the work plan to reflect the need for this balance:

- How should we ensure that the desire for market certainty is balanced with the need for timely integration of advancements in lifecycle analysis?

One panel member also suggested that discussions of lifecycle analysis should be broadened to include water use and other “sustainability” factors. RFA strongly disagrees; the focus of lifecycle analysis in the context of the LCFS has been, and should continue to be, carbon intensity. CI values are the currency of the LCFS program, and determinations of lifecycle CI values have nothing to do with water use or the other factors cited by the panelist. Further, ARB is currently addressing sustainability issues through a separate work group. Finally, to the extent that ARB considers water use and other sustainability factors for biofuels (either in the context of the advisory panel discussions or in the sustainability work group discussions), it must also consider those factors for all other fuels—including fuels derived from conventional and marginal sources of petroleum.

3. **Topic 6 – Supply and Commercialization:** While determining the likely availability of alternative fuels and vehicles is very important, we believe consideration must also be given to the infrastructure requirements associated with each alternative fuel pathway. We recommend the addition of a question to the work plan to reflect the need to assess infrastructure requirements:

- What are the infrastructure requirements associated with each alternative fuel pathway evaluated by ARB and what actions are being taken to address those needs?

4. **Topic 14 – High Carbon Intensity Crude Oil:** While this topic was not one of the 13 issues specified by the regulation for evaluation by the advisory panel, we agree that it deserves further consideration. In particular, the advisory panel must remember that the inclusion of a separate process for HCICO screening is a statutory requirement intended to ensure that the LCFS program is accurately accounting for the increasing carbon intensity of crude oil. Several panel members expressed concern about the uncertainty of the HCICO provisions and the ability of the provisions to achieve their objectives. Panelists should be reminded that several aspects of the LCFS regulation, such as indirect land use change (ILUC), are equally (or more) uncertain and technically questionable. It should be noted that many of the same panelists raising concerns about the uncertainty and purpose of HCICO provisions suggested earlier that uncertainty was not a valid reason for excluding ILUC from CI determinations or examining more workable approaches to ILUC.

#### **COMMENTS ON TOPIC 5 OUTLINE (ULTRALOW CARBON FUELS)**

1. **Scope and Purpose:** The scope of this issue, and its role within the LCFS regulation, is still somewhat unclear. Neither the LCFS ISOR nor the final regulation provides a definition of “ultralow carbon fuels” or explains what, if any, special consideration is envisioned for this class of fuels. Further, the existing structure of the LCFS already provides incentive for regulated parties to use the fuels with lowest CI scores, so it is unclear what “additional mechanisms” would be necessary or appropriate to “incentivize higher volumes of these

fuels.” Because there is only one reference to “ultralow carbon fuels” in the entire regulation (i.e., Section 95489), it seems prudent to ask the ARB board and staff to clarify the intended role of ultralow carbon fuels in the LCFS. Additionally, it seems that a serious discussion must first occur about the “advisability” and necessity of designing “additional (incentive) mechanisms” before any further discussion ensues on what those incentives might look like.

- 2. Definition of Ultralow Carbon Fuels:** It is inappropriate to discuss what role ultralow carbon fuels may play in LCFS compliance, or what additional incentives may be necessary to bring these fuels to market, *without first concretely defining what constitutes an ultralow carbon fuel*. Because there is no existing definition of “ultralow carbon fuels” in any Federal or state statute (of which we are aware), ARB must take great care in defining the term and should avoid arbitrary descriptions or definitions. ARB *should not* use the definition or GHG reduction threshold associated with “advanced biofuel” from the Energy Independence and Security Act of 2007 (EISA) to define ultralow carbon fuels for the LCFS for several reasons, many of which were discussed by the panel at the April 26 meeting.<sup>1</sup> It seems that the designation of “ultralow carbon fuels” should be reserved for those fuels that offer a low enough CI score to facilitate LCFS compliance in the program’s out years (i.e., 2016-2020), when mandatory CI reductions ramp up significantly. What constitutes “low enough” is a question that should be further discussed by the panel and instructed by analysis of possible compliance scenarios.

Further, as a point of clarification, the EISA definition of “advanced biofuels” specifies a GHG reduction of 50% compared to baseline petroleum, not 60% as described in the ARB work plan draft (the 60% GHG reduction threshold in EISA is applicable to “cellulosic biofuels,” which are a sub-set of “advanced biofuels”). Additionally, we recommend ARB use a threshold that utilizes the grams CO<sub>2</sub>e./megajoule (g/MJ) metric (such as 25.0 g/MJ, for example) as the determinant for a “ultralow carbon fuel,” rather than using the percentage GHG reduction compared to the baseline. This is because ARB has acknowledged that the CI of baseline petroleum and the compliance schedule may change as the CI of various components of baseline fuels (i.e., corn ethanol) changes. Changes to the gasoline baseline CI value might mean that a fuel that was previously classified as “ultralow carbon fuel” is no longer considered as such, based on a percentage GHG reduction metric, whereas using the g/MJ threshold metric would mean the fuel is still considered an ultralow carbon fuel.

Thank you for the opportunity to share our comments on the April 26 advisory panel meeting. I look forward to discussing these issues at future panel meetings.

Sincerely,



Geoff Cooper  
Vice President, Research & Analysis

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<sup>1</sup> The lifecycle GHG analysis conducted by EPA for EISA utilized an entirely different analytical framework, different boundaries, different timeframe, etc. than the ARB analysis for the LCFS. The differences between the two approaches resulted in substantially different CI values and different understandings of what is an “advanced biofuel” (e.g., soy-based biodiesel reduces GHGs by 57% compared to baseline petroleum according to EPA, and is thus an “advanced biofuel”, while ARB’s analysis suggests soy-based biodiesel reduces GHGs by only 12% compared to baseline petroleum). In other words, the CI values obtained by EPA, and the resulting inferences about which fuels are “advanced biofuels” and which are not, are not comparable to those obtained by ARB.