

List of Methods 2A- 2B Comments as of 02/26/2010

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From: Greenizan, Bill (MEI) [Bill.Greenizan@ontario.ca]
Sent: Wednesday, August 05, 2009 1:03 PM
To: Ingram, Wes@ARB
Subject: Guidelines for new pathways - Aug 5 Workshop
Hi Wes:

I would anticipate that some fuels may enter the California market periodically (i.e. less than 10 million gge per year) that would not necessarily have a carbon intensity assigned to them.

For instance, biodiesel produced from western Canadian canola could enter the California market on occasion. Without a CA-GREET "canola biodiesel" pathway nor an indirect land use change factor (as determined by the CARB board) for this feedstock, how will CARB determine the carbon intensity of this fuel? Will the supplier in this case simply use the carbon intensity value for "generic biodiesel" in the Look-up Table?

I suspect this issue may be relevant for other biofuels (e.g. non Brazilian sugarcane, ethanol from non-corn sources (wheat, sweet potatoes)).

Thanks for the clarification.

Cheers,

BILL GREENIZAN
Senior Advisor, Oil
Ontario Ministry of Energy & Infrastructure
416-326-0548



September 9, 2009

John Courtis
California Air Resources Board
1001 I Street
Sacramento, CA 95812

Re: Draft Guidance to Regulated Parties on Establishing New Fuel Pathways and Sub-Pathways

Dear Mr. Courtis:

Thank you for the opportunity to comment on the California Air Resources Board's (CARB) Draft Guidance to Regulated Parties on Establishing New Fuel Pathways and Sub-Pathways. Friends of the Earth supports the checks put into place to ensure that new pathways – under both methods 2A and 2B – are scientifically documented and sufficiently investigated. We also support CARB's requirement that indirect land use analysis be performed by CARB. Below we offer suggestions regarding compliance auditing, the substantiality requirement, differentiation of new fuel pathways, and the trade secrets issue.

1) **Spot-checks for pathway accuracy.**

Although the procedures put in place to establish sub-pathways and new pathways are fairly rigorous, we are concerned that the system could be gamed or simply break down as a result of poor tracing and record keeping when credit is given based on changes that do not involve permanent capital investments. As an example, biodiesel producers are assumed in the ARB default analysis to use petroleum diesel fuel in the transport and production of soy feedstock and resultant fuel, but a sub-pathway might be created for producers using biodiesel rather than petroleum in transport and farming activities.¹ We are concerned that there is currently too little documentation about whether producers are consistently meeting the requirements of this pathway. If the economics of fuel use change – for example because the LCFS drives the value

¹ According to CARB figures, if petroleum diesel used for shipment is augmented with biodiesel in a 50% blend, (possible in most modern diesel engines with little to no modification), about 2gCO₂e/MJ savings results. Where a similar blend is used in tractors for feedstock cultivation, the 5gCO₂e/MJ substantiality requirement would easily be met.

of the B50 blend much higher than that of a conventional diesel blend – companies would have a strong incentive to switch back to conventional fuels in their fleets. They would not, however, have an incentive or even perhaps knowledge that it was necessary to inform CARB of the shift.

Friends of the Earth recognizes that it is not possible to audit in detail every producer in every year, but we recommend that a spot-check audit system be put into place wherein a producer is required to provide documentation of feedstock purchases, process energy purchases, and other inputs after the fact. The possibility of a penalty would encourage appropriate recordkeeping and reporting while removing any incentive to report best practices that may not be uniformly enacted.

2) Method 2A “substantiality requirement.”

We are concerned that the 10 million gallon per year substantiality requirement under Method 2A will exclude a great many innovative efficiency initiatives that should be supported.

As stated in the draft document, one of the goals of the LCFS “is to incentivize the development of lower carbon fuels for the California transportation market.” We are concerned, however, that a pathway that is being used to produce 10 million or more gallons of gasoline equivalent fuel annually is not actually “in development” – it has been commercially deployed. We appreciate that CARB has recognized and addressed this dynamic in not requiring that the substantiality requirements be met for new fuel applications under method 2B. However, many important gains, such as improved feedstock production efficiency, reduced travel distance, altered process fuels, and countless others can be made to existing fuel pathways. It is important that these actions be encouraged, even though they may be piloted at less than 10 million gallons.

We recognize that there is a managerial efficiency constraint to contend with and that CARB should not be expected to create pathways for every minor improvement. In order to accommodate this managerial constraint, as well as the goal of incentivizing improvement, we propose that the 10 million gallon minimum be lowered to actual production of 1 million gallons annually or a similar number that allows smaller producers to innovate, while ensuring that CARB can process applications thoroughly. Alternatively, CARB could lower the minimum requirement to 1 million gallons so long as lower volume producers provide a business plan demonstrating that the facility in question is a pilot for a planned larger operation. A third alternative would be to provide producers with a “pre-certification” option allowing producers to provide data to CARB to evaluate whether their improvement activities would be sufficient to meet the 2A substantiality requirement. While this would not substitute for the actual certification of the lifecycle pathway, it would provide valuable information for alternative producers in the pre-production stages.

3) Increase in number and variety of fuel pathways in lookup table.

For many established pathways, CARB has developed default values from what are deemed industry average practices. This use of averages means that actual emissions will probably be greater than those reported because less efficient producers will take the default “score” while more efficient producers will apply for sub-pathways. Method 2B could exacerbate this problem

by basing a new fuel pathway upon a single “high-performing” producer rather than conservative industry averages. For example:

A producer of biodiesel from palm oil approaches ARB to certify a new pathway under method 2B. This producer is a member of the Roundtable on Sustainable Palm Oil, and as such has implemented numerous efficiency measures in its production system. The producer’s feedstock is grown exclusively on degraded and abandoned land, causing less indirect land-use change and sequestering carbon in the soil. Process energy is provided through solar, wind, and on-site biomass electricity, and transportation is conducted using 100% biodiesel.

Under this scenario, once this pathway has been set, other palm-oil biodiesel producers, in the language of the draft regulation, are instructed to “use the carbon intensity value that most closely corresponds to the production process used to produce the regulated party’s fuel.” Thus, the carbon intensity value that most closely corresponds to all other palm oil producers will be the pathway described in the above example. Although many other palm oil producers may not be implementing the efficiency measures put in place by the original applicant, under the current structure of the regulation they would receive credit as if they were. This would be akin to CARB developing a default value for sugarcane ethanol based on one producer’s use of mechanical harvesting and bagasse co-firing and then allowing other producers – whatever their practices – to come in under the pathway.

The creation of defaults from highly efficient cases will reduce the incentive to innovate, because efficiency gains will be attributed to non-deserving competitors, reducing the competitiveness of the best performers. Such an outcome would perversely reward bad actors by giving them an advantage against competitors whose efficient practices create added expense.

To prevent this problem from occurring, we suggest that when a new fuel pathway is being established pursuant to Method 2B, CARB create differential pathways based on different possible lifecycle factors, so that available pathways more accurately characterize a range of producer practices. Corn ethanol is a case where this has already been put into practice. The CARB lookup table has been populated with 12 pathways, characterizing the variety in production methods from cultivation location to process energy use and refining technique.

This could be done in a number of ways. Sensitivity analysis could be used to identify those few parameters that have significant impact on the final score. Individual producers could then be required to report on those critical parameters (e.g. process energy source, cultivation practices) with the remainder of values scored using mostly default values. Alternately, pathways could be developed for the bounding cases of each of these critical parameters in a manner similar to what CARB has done in the cases of corn and sugarcane ethanol.

Alternately, we recommend that CARB study the processes proposed under a method 2B application and develop not only the pathway established by the applicant, but also a worst-case emission scenario for that fuel type (e.g. coal-fired process electricity, crop displacement, heavy agrichemical use) and a best case scenario. Other producers intending to use the same fuel type would then default to the pathway that best represents their practices.

4) Trade Secrets

We support CARB’s statement that “[n]ew sub-pathways can be approved only if enough information is available publicly to justify that approval.” This is important since, as identified by CARB, once a sub-pathway is approved and added to the lookup table, other regulated parties will use the new pathway to the extent they can demonstrate that the new pathway best describes their processes.

It is also critical that the process by which credit values are set be as transparent as possible to the public. If a significant amount of information in a pathway is designated as trade secret, the public will be unable to participate meaningfully in the process of establishing credit values. We have seen a recent trend of industry designating more and more information as trade secret, effectively shutting the public out of meaningful participation in the regulatory process. We support CARB staff’s effort to recognize and protect as confidential truly trade secret information, while requiring that the vast majority of information be made public so that meaningful stakeholder participation can occur. The CARB Board has been very clear that transparency is critical to the process and we appreciate CARB staff acknowledging this goal.

5) Workshopping Pathway Development

Finally, we request that CARB’s guidance document specifically include direction for the inclusion of stakeholder input through public workshops as part of the Method 2A and 2B pathway development process. Workshopping provides an opportunity for meaningful stakeholder comment prior to official submission of a proposed rulemaking, after which point it is difficult to make substantive changes.

Thank you for your consideration of these comments.

Sincerely,



Danielle R. Fugere
Friends of the Earth



John Shears
Center for Energy Efficiency and Renewable Technologies



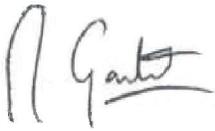
Simon Mui
Natural Resources Defense Council



Shankar Prasad
Coalition for Clean Air



Bonnie Holmes-Gen
American Lung Association in California



Remy Garderet
Energy Independence Now Coalition



Patricia Monahan
Union of Concerned Scientists

August 28, 2009

Mary D. Nichols, Chair
California Air Resources Board
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1001 I Street, P.O. Box 2815
Sacramento, CA 95812

Re: Request for Comments on Establishing New Fuel Pathways and Proposal for an Expert Workgroup

Dear Ms. Nichols:

We welcome the opportunity to comment on California Air Resources Board (CARB) staff proposals regarding the creation of a Low Carbon Fuel Standard (LCFS) Expert Workgroup (August 3, 2009) and on Procedures and Guidelines for Regulated Parties to Establish New Fuel Pathways (August 4, 2009). We applaud the public process that CARB is utilizing to review the process for new pathway development and for the selection of Expert Workgroup members. Only with this type of identification of the expertise needed, and a public selection process to ensure all appropriate qualified candidates are identified, can a group be established that can deliver a work product with the scientific quality and integrity expected of the CARB.

Establishing an Expert Workgroup

We agree wholeheartedly with the Board's decision to establish an Expert Workgroup to provide the necessary expertise to address import unresolved issues which cloud adoption of the proposed LCFS. We are hopeful that the charge to an Expert Workgroup will include suggested improvements that were provided to CARB during the initial public comment period ending April 22, 2009 and the subsequent public hearings ending April 23-24, 2009. Because of the wide divergence of scientific opinion concerning indirect land use value determinations, it is imperative that the Expert Workgroup be allowed to complete its work before the ILUC component of the CI value determination is implemented. In short, we believe that the work of the Expert Workgroup needs to be structured in such a manner as to address the requirements outlined in CARB Resolution 09-31 and to ensure that the LCFS pathways identified by CARB are an accurate reflection of current Carbon Intensity (CI) values:

Priority One: Harmonization of Indirect Land Use Efforts

Most important, the group must harmonize its efforts with other studies to study and establish the effects of indirect land use. CARB specifically indicated that CARB staff is to "coordinate this effort with similar efforts by the U.S. EPA, European Union and other agencies pursuing a low carbon fuel standard." With international and federal experts suggesting that additional time and scientific rigor are required to provide the appropriate framework and accurate data for indirect land use determinations, California should seize this opportunity to coordinate its studies with theirs, rather than pursue its own separate and abbreviated path. As we have previously indicated to CARB, at a minimum, inaccurate assumptions have been made regarding yield, yield changes over time, intensification, US versus rest of world yields, land resolution, and co-product credits that significantly impact the indirect land use contribution. Broader scientific agreement on the framework and boundaries of indirect land use and

the appropriate treatment of emission factors, elasticity, and time accounting are all important to ensuring quality science leading to quality decisions for the public good.

Priority Two: Address Current Direct CI Pathway Value Errors and a Means for Keeping Data Current.

The group must update the current direct components of the pathways in the proposed LCFS model. The model should reflect current and accurate data with provision for annual updates. The use of inaccurate or dated information in the determination of CI values falsely represents the relative benefits of various fuels, processes and technologies. Accuracy is critical to incent the correct behavior and to achieve the desired global warming reductions. This applies, at a minimum, to the following areas: fertilizer use, water use, co-product treatment, crop yields, ethanol plant production values (e.g. energy and yield) and on farm fuel use.

Establishing New Fuel Pathways

To encourage continued optimization and innovation, it is critical that current pathways be updated annually, as mentioned above, to reflect current industry practice. Second, new pathways will serve to lower barriers to entry. Provision must also be made to assure the confidentiality of proprietary technology developments and for proposals by parties other than regulated parties for the addition of new pathways. Finally, indirect land use changes that are demonstrable via direct land use reduction, should not require Board review.

Priority One: Current pathways must be updated annually. Continued progress will occur in the reduction of fertilizer use, the reduction of on farm fuel, the increase in crop yields per acre, the retention of on farm biomass, and the efficiency of ethanol plant production processes. The beneficial adoption of technical innovation must be fostered by means of annual updates to the pathways. This also assures CARB staff of its ability to quantify CI reductions reflective of the current state of renewable fuel production. This also raises the importance of national generation of this information on an annual basis, reinforcing the importance of CARB working with federal agencies to ensure an efficient and effective process is developed for generating and providing this information.

Priority Two: New pathways which reflect indirect land use changes that are demonstrable via direct land use reduction should not require Board approval, as has been proposed. Applicants who are able to demonstrate that direct and measurable reductions in required crop production land resulting from their proposed pathway or pathway modification should not be subjected to a delayed review process requiring board versus staff involvement. Examples of technologies that would provide this ready demonstration of reduced land use are: front end fractionation to food grade corn oil and ethanol yield per bushel increases.

Priority Three: Pro-active establishment of new pathways must be encouraged. Non-regulated parties should be allowed to propose new pathways, and the confidentiality of proprietary technology must be protected. Incenting CI value reduction via technology innovation is critical for California to achieve its CI intensity reduction goals. Adoption of new technologies is accelerated when the CI benefits are made evident. By pre-approving a number of additional pathways which could be recommended as a group, the work of CARB staff is minimized.

The opportunity for non-regulated parties to submit new and/or improved pathways will further ensure a rapid pace of innovation and will again allow for a pathway to be submitted, reviewed and approved that could be applicable to multiple producers. These parties are better able to have the expertise and

resources to develop the raw data and quantification of data required by CARB staff. Finally, however, there must be a means of protecting data that is proprietary in nature. If data transparency is required, innovations will be both narrowed to those which are patentable and delayed by the requirement for a patent process. A means by which outside independent technology consultants could be used to provide independent assessments of the technology, similar to the process utilized by banks in financing determinations, would provide an alternative means of obtaining necessary information without disclosing proprietary data.

Thank you for the opportunity to submit these comments. We stand ready to work with CARB staff in the further development of these proposals, and to nominate individuals who are well-qualified to serve on the Expert Workgroup. We believe that thoughtful deliberation by the Workgroup on these topics, and the adoption of an accessible protocol for the recognition of new pathways will contribute significantly to achievement of the Board's LCFS objectives.

Sincerely,



John S. Hickman, Ph.D., Director, Biorenewable Energy and Life Sciences, Deere & Company



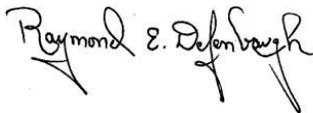
Neal Jakel, Delta-T Corporation



Frank Magazine, Business Manager, Emerald Foam Control



Rob Elliot, President, Illinois Corn Growers Association



Raymond E. Defenbaugh, President, Illinois Renewable Fuels Association



Gary Edwards, President, Iowa Corn Growers Association



Craig Pilgrim, Global Marketing and Product Development Manager, Lallernand Ethanol Technology



Martha A. Schlicher, Ph.D., Vice-President Technology, Bioenergy, Monsanto Corporation



John Caupert, Director, National Corn to Ethanol Research Center



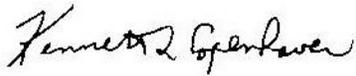
Alan Tiemann, Chairman, Nebraska Corn Board



Michael S. Grats, President, NewBio E Systems Inc.



Adam Monroe, President, Novozymes North America



Kenneth Copenhaver, Ph.D., University of Illinois-Chicago



Steffan Mueller, Ph.D., University of Illinois-Chicago



Rita Mumm, Director, Illinois Plant Breeding Center, University of Illinois Urbana Champaign



Hans Stein, Ph.D., University of Illinois Urbana Champaign

Cc: Dr. Daniel Sperling
Mr. Ken Yeager
Ms. Dorene D'Adamo, Esq.
Mrs. Barbara Riordan
Dr. John R. Balmes, M.D.
Ms. Lydia H. Kennard, Esq.
Ms. Sandra Berg
Mr. Ron Roberts
Dr. John G. Telles, M.D.
Dr. Ronald O. Loveridge



Kern Oil & Refining Co.

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Fax (661) 845-0330

August 18, 2009

Mr. John Courtis
Air Resources Board
1001 I Street
P.O. Box 2815
Sacramento, CA 95812

SUBJECT: Low Carbon Fuel Regulation – Renewable Diesel from Tallow Pathway
Comments

Dear Mr. Courtis:

Kern Oil & Refining Co. (Kern) is one of the only two remaining small refiners producing transportation fuels, gasoline and diesel, in California. Kern is the only small refiner producing CARB reformulated gasoline and Ultra Low Sulfur Diesel. It is important to note that Kern is the only refinery between the Bay Area and Los Angeles that is producing gasoline and diesel. Without Kern in the Central Valley, transportation fuels need to be trucked into the San Joaquin Valley from the Bay Area or South Coast. This would create an emissions increase of not only GHG emissions but also of NOx, VOC and PM. In addition, Kern is a less complex refinery than those in the Bay Area and South Coast since Kern does not operate catalytic crackers, hydrocrackers or cokers. Kern also uses less energy than many of the major refineries since Kern's crude feed is light, sweet, and local crude transported to the refinery via pipeline.

Kern is on record with the Board, and continues to advocate for consideration for small refiners. Small refiners are clearly being disproportionately and negatively impacted economically by this new fuel standard. In developing fuel standards in the past, CARB has recognized and thoughtfully considered the significance of the financial impacts to California's small refiners, and CARB has also recognized the important role small refiners provide while stabilizing the market and delivering transportation fuels to rural markets often ignored by the major refiners.

Kern believes the regulatory development process for the LCFS is moving much too quickly and needs to be slowed down. It appears the regulations are being developed before the science is well understood and confirmed. An example of how this regulation

is being “fast-tracked” is apparent from the Board’s adoption of the regulation even though it was incomplete at the time and still a work in progress.

Kern is committed to a continuing dialog with Staff and with the Board in an effort to advocate due fairness to small refiners within this regulatory process. And as follow up to the information presented at the August 5, 2009 public workshop, Kern is providing the following comments for the record.

Kern requests Staff provide all of the data inputs used in establishing the basis for the Renewable Diesel Tallow Pathway. It is not clear how the carbon intensity (CI) for this pathway could have effectively doubled from the prior excel spreadsheet on CARB’s LCFS website. Full transparency of data needs to be provided so stakeholders can properly evaluate the accuracy of the data and the validity of the assumptions used.

Kern agrees with Staff that the Tallow Pathway land-use component should be zero since tallow is generated from a waste product. However, Kern takes issue with the GREET default value for transporting the tallow in railcars to California from the Midwest. Kern recommends another and different default value be considered for tallow produced in California, a potentially significant tallow supply source. Transportation of renewable diesel is also skewed high for small refiners and other biorefiners that may distribute locally. Nearly all of the small refiners fuel products are transported directly to retailers and are not supplied to bulk terminals. In CARB’s calculation, transportation to bulk terminals accounts for approximately 30% of the renewable diesel transport and distribution GHG emissions. Small refiners that distribute products locally should not be disproportionately penalized for the average mix of transportation and distribution that large oil companies operate under.

On Table 1.01, Rendering Energy for Production of Tallow (Ref. Preliminary Draft Distributed for Public Comment, Version 1.0, dated July 20, 2009), Kern requests clarification as to why the thermal and electrical energy for Plants 6 and 7 are nearly double that of Plants 1 through 5. The average of these seven data points are skewed significantly higher by use of the two high data points. These two potential “outliers” appear to be aligned with the Nelson and Schrock data that may allocate all rendering energy to fat and none to meat and bone meal. The four other study reports cited are not only lower than the average energy calculated by CARB, but are lower than each individual plant used in the CARB calculation. Kern also requests further discussion regarding the fact that data used in this analysis is provided by only one biodiesel manufacturer source, rather than multiple tallow manufacturing sources.

August 18, 2009
LCFS Comments
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In section 2, Renewable Diesel Production (Ref. Preliminary Draft Distributed for Public Comment, Version 1.0, dated July 20, 2009), it is not clear where the co-process inputs originated for feedstock pre-heating, distillation and hydrotreating. Since there is currently not a single biorefinery in operation in the United States producing renewable diesel as a co-product or stand alone fuel, CARB's energy use data is likely extrapolated from research and development data or from existing petroleum refineries. In either case, the data needs to be further examined and developed to correlate closely with future biorefiners.

In summary, Kern suggests this regulatory process be slowed down so that stakeholders and staff have adequate time for review. Kern requests more transparency and more timely sharing of data and assumptions used to determine GREET defaults and pathway CI values. Kern recommends a GREET default be developed for the transportation component of tallow produced in California. Kern also recommends that CARB further assess energy use and transportation assumptions for biorefineries to match closely with the typical unit processes and geographic areas supplied.

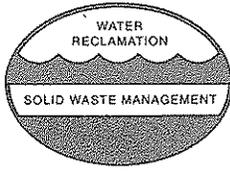
Kern appreciates this opportunity to provide comment, and we are committed to working with Staff throughout this regulatory process.

Sincerely,

COPY

Robert H. Richards
EHS Manager

cc: Dean Simeroth, Chief Criteria Pollutants Branch
Renee Littaua, Manager, Fuels Section
Floyd Vergara, Manager, Industrial Section



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STEPHEN R. MAGUIN
Chief Engineer and General Manager

October 20, 2009
File No.: 31-220.10

Messrs. John Curtis and Wes Ingram
California Air Resources Board
1001 "I" Street, 23rd Floor
Sacramento, California 95814

Gentlemen:

Comments on Establishing New Fuel Pathways under the Low Carbon Fuel Standard Procedures and Guidelines for Regulated Parties

The Sanitation Districts of Los Angeles County (Sanitation Districts) appreciate this opportunity to comment on the preliminary draft Establishing New Fuel Pathways under the California Low Carbon Fuels Standard Procedures and Guidelines for Regulated Parties (Draft Guidelines), dated August 4, 2009.

The Sanitation Districts have previously submitted four comments letters regarding the Low Carbon Fuels Standard (LCFS) regulation and also provided testimony at the adoption hearing for the incentivization of waste-derived fuels within the LCFS. In our most recent comment letter regarding the Modified Regulation Order, dated August 19, 2009, we opposed adopting the Lookup Tables into the LCFS regulation due to the technical rigor and time requirements of the statutory process to amend an adopted regulation. As stated in our last comment letter, this cumbersome process of amending the Lookup Tables for every modified or new fuel pathway could impede the progress of emerging renewable fuel industries such as the waste-derived fuel industry, attempting to enter the California transportation fuel market. We continue to believe that the Lookup Tables should remain only as a reference to the regulated parties, and allow for modified and new fuel pathways to be added with more flexibility than the statutory process to amend an adopted regulation.

The Draft Guidelines have affirmed our concerns, detailing the length of time required to complete the process to add new fuel pathways and sub-pathways using either Method 2A or 2B in the LCFS regulation. The time requirement between application submittal and approval could range from 120 to 180 calendar days assuming things go smoothly¹. If there are complications

¹ Presentation slide number 18, Low Carbon Fuel Standard Workshop, Draft Guidance to Regulated Parties on Establishing New Fuel Pathways and Sub-Pathways, August 5, 2009.

toward the end of the process, an additional 120 days is added for CARB and the applicant to correct any problems identified by the Office of Administrative Law (OAL). In other words, the entire procedure could take up to four to ten months to get a new pathway or sub-pathway added to the Lookup Tables.

The timeframe above does not include the additional time required for the applicant to meet some of the specific requirements prior to initiating this process. For example, the scientific defensibility for both Method 2A and 2B requires publication of the pathway in a major, well-established, peer-reviewed scientific journal. Assuming first that the pathway is even considered for publication, depending on the scientific journal, this process could take months on end. The Draft Guidelines allow for a second option to meet the scientific defensibility criteria, where CARB will review the applicant's supporting documents for the new fuel pathway and make the determination if the pathway is scientifically defensible. This second option is better than the first, but it may not be realistic in the 15-day timeframe allotted for CARB to review the massive amount of information to make a decisive and fair determination. Due to the nature of the stringent process to amend an adopted rule, we again suggest CARB not adopt the Lookup Tables in the LCFS regulation, and work with stakeholders to simplify the process of adding new pathways and sub-pathways.

Method 2A has a "substantiality" requirement in which an applicant must demonstrate (1) the ability or willingness to produce more than 10 million gasoline gallon equivalents per year of the fuel with the new sub-pathway and (2) the proposed new sub-pathway will yield a carbon intensity improvement of a least 5 gCO₂e/MJ over the existing primary pathway. The numbers set for the volume requirement and the reduction carbon intensity are both arbitrary and do not incentivize companies to produce lower carbon fuels. In fact, it could stymie smaller companies trying to break into the competitive fuels market. The goal of LCFS regulation is to decrease the carbon intensity of transportation fuels in California as a whole by 10 percent by 2020. It does not make sense to restrict potential production of lower carbon fuels. Accordingly, we recommend the substantiality requirement for Method 2A be removed from the Draft Guidelines.

Table 1 in the Draft Guidelines lists fuels expected to have no or inherently negligible land use effects on carbon intensity. However, for biodiesel and Fischer-Tropsch diesel fuel, waste-derived feedstocks such as biosolids are not listed in the table. In the four comment letters we submitted CARB regarding the LCFS regulation, we have identified biosolids as a potential feedstock to produce biodiesel or Fischer-Tropsch diesel. We request biosolids be added to Table 1 for biodiesel and Fischer-Tropsch diesel. Similarly, CNG/LNG fuels are not listed in Table 1 for sewage digester gas, which we have identified in our comment letters. We again request that sewage digester gas be included in Table 1 for CNG/LNG and electricity.

The Sanitation Districts hope CARB will continue to encourage the use of waste-derived alternative fuels and not place burdensome requirements that stagnate the emerging industry from contributing to the transportation fuel market in California. To reiterate, the Sanitation

Districts strongly recommend the Lookup Tables remain as references for regulated parties to utilize as a guide, as intended in the original regulation language.

If you have any questions regarding this transmittal, please do not hesitate to contact me at (562) 908-4288, extension 2113.

Very truly yours,
Stephen R. Maguin



Gregory M. Adams
Assistant Departmental Engineer
Air Quality Engineering Section
Technical Services Department

GMA:DLR:ML:bb

cc: Mr. Bob Fletcher - CARB
Mr. Floyd Vergara - CARB



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Via Email

August 28, 2009

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RE: Comments On The Preliminary Draft of Procedures and Guidelines for Regulated Parties for Establishing New Fuel Pathways Under The California Low Carbon Fuel Standards

Dear Mr. Ingram:

Shell Oil Company appreciates this opportunity to provide comments on the preliminary draft of Procedures and Guidelines for Regulated Parties for Establishing New Fuel Pathways Under the California Low Carbon Fuels Standards. Our comments focus on four aspects of the draft. First, we suggest that CARB simplify the process by using the same process regardless of whether or not the proposed fuel pathway potentially results in indirect emissions. Second, we suggest that CARB simplify the process to enable expedited decision-making. Third, we suggest that CARB clarify the process to ensure that a process is available for parties to demonstrate that their pathway avoids or significantly reduces indirect emissions relative to the default indirect emission values. And, lastly, we offer some specific comments on the proposed procedures and guidelines.

I. CARB Should Simplify the Process by Using the Same Process Regardless of Whether The Proposed Fuel Pathway Results in Indirect Emissions

CARB has proposed a bifurcated process in which pathways that have indirect effects must go before the Board before the pathway can be approved. Rather than adopt this approach, which is likely to result in substantial delays in the approval of new pathways, and which in turn can stifle innovation, we suggest that CARB adopt a single robust process that allows the Executive Officer to make the final decision on all new fuel pathways.

II. CARB Should Simplify The Process To Enable Expedited Decision Making

We are concerned that a lengthy process that requires rulemaking in order to add new fuels pathways will slow the pace of new fuel development. CARB must create a faster process that provides investment certainty for companies considering development of a new fuel pathway and yet still provides the technical assurance that the new pathways are sound. We believe that CARB should be consistent with approaches it has taken in other fuels regulatory programs. For example, although the specifications for CARB diesel aromatics are included in CARB's regulations, CARB allows parties to develop alternative formulations that CARB approves via a petition process rather than through a formal rulemaking process.

Instead of requiring each petition for a new fuel pathway to be approved via a formal rulemaking process, we suggest that CARB revise the regulations to establish a petition process in the regulations that clearly specifies the process, and substantive criteria to be applied when the Executive Officer evaluates a petition for a new fuel pathway. By specifying the process that applies in the regulations, we believe that CARB can then approve new fuel pathways administratively without having to go through a formal rulemaking process, since the process itself would have been approved through the rulemaking process. If the petition process described in the regulations is robust, there should be no need to approve each new pathway through a formal rulemaking process. This approach would be consistent with the approach that CARB took in the CARB diesel program.

III. CARB Should Clarify The Process To Ensure That Options Exist For Parties To Demonstrate That Their Pathway Avoids Or Significantly Reduces Indirect Emissions Relative To The Default Indirect Emission Values

CARB has set forth the process that applies when a proposed pathway will "create significant land use change effects." CARB also lists various biofuels that are deemed to have no or inherently negligible land use effects on carbon intensity. However, CARB's draft does not appear to provide a mechanism for a party to demonstrate that their biofuel has no or a significantly reduced indirect land use change effect compared to the effect established in the default values. To encourage innovation and the production of the most sustainable biofuels, CARB should ensure that the process allows parties to demonstrate that their biofuel is produced from feedstocks that have no or a significantly lower indirect land use change impact than implied by the default indirect land use change factor values for that feedstock pathway.

A suitable process could extend the mechanism for establishing a new fuel sub-pathway to include demonstrated revisions to the indirect land use change modeling alone (as opposed to only basing sub-pathways only on changes to CA-GREET). This is consistent with the CARB view (on p10 of the proposal) that pathways are created using both CA-GREET and GTAP (or equivalent) models as it allows new sub-pathways to be based on revisions to either of these models. Examples of suitable revisions to the

indirect land use change modeling could include factors such as demonstrable changes to the input parameters of the GTAP model, more accurate emission factors or consideration of the agricultural practices listed in section IV of the proposal, which sets out criteria for specific biofuel feedstocks that are expected to have no or inherently negligible land use effects on carbon intensity.

IV. Specific Comments On the Proposed Process

After a party submits an application and supporting information, the current proposed process would allow CARB to find that the new proposed pathway is not warranted. We believe that the process leading to this particular outcome is inconsistent with the overall scheme CARB has proposed. If CARB believes it necessary to go through a formal rulemaking process to approve a petition for a new pathway, then a decision by CARB to reject a new pathway should be subject to the same process. In any event, if CARB decides that a new pathway is not warranted, that decision should be accompanied by a statement of reasons, and an acknowledgement that CARB's decision constitutes a final agency action subject to judicial review.

CARB should provide additional examples, and clarification, as to what constitutes a new pathway versus a modified pathway.

We also suggest that CARB clarify the substantiality criteria under method 2A. As currently drafted, the language states that a party petitioning for a new modified pathway would be required to state "his or her ability and willingness to produce more than 10 million gallons per year." Instead, the substantiality criteria should be based on the pathway having the capability to be scaled by multiple producers to provide 10 million gallons of gasoline equivalent per year.

CARB should more specifically define what information is needed to support a carbon intensity calculation for a pathway. It is not clear, for example, whether CARB would accept emissions projections, or would require actual historical performance data.

We agree that the five basic categories listed in section IV represent a good initial set of criteria for specific biofuel feedstocks that are expected to have no or inherently negligible land use effects on carbon intensity. However, we would recommend that under section IV the first category should be expanded to include the following: 1) fuel feedstock crops grown on land deforested before a certain date (e.g. Roundtable for Sustainable Palm Oil uses 2005, European Renewable Energy Directive uses 2008), and 2) fuel feedstock crops grown on abandoned/underutilized/neglected farmland including pastureland. We also reiterate our earlier point in requesting that a suitable, simple process be defined for reducing or removing the indirect land use change carbon intensity factor for an existing pathway when one of these criteria can be demonstrated for a particular biofuel usage. In particular we suggest examining use of carbon intensity bonuses for the biofuel when one of these criteria can be demonstrated, partially or completely offsetting the default indirect land use change carbon intensity factor. This would enable synergies with the European Renewable Fuels Directive.

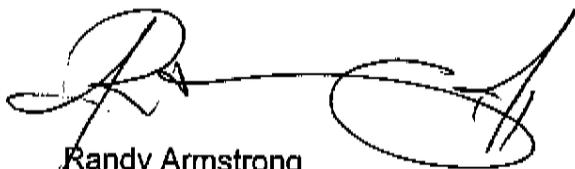
In addition, where CARB specifies 'sustainable' sources of biomass (e.g. sustainably harvested wood and forest residues), we believe it is critical that CARB ensures definitions are cited and consistent with the existing international sustainability standards/certification schemes. For instance, when referring to sustainably harvested wood and forest residues, CARB should ensure consistency and recognize the Forest Stewardship Council (FSC) definition. And, for defining sustainable biomass and specific feedstocks e.g. sustainable sugar, we would urge CARB to recognize and/or use definitions established by sustainable biofuel standards/certification bodies including Better Sugar Initiative, Roundtable for Responsible Soy, Roundtable for Sustainable Biofuels and Roundtable for Sustainable Palm Oil.

On the detail of Table 1, under the Conditions/Restrictions column for Crop Residue, we question how leaving crop residue on the fields impacts indirect land use change. We would suggest that this is an issue for the CA-GREET pathway in terms of fertilizer use and should be taken into account when developing the pathway.

* * *

Shell appreciates this opportunity to comment on the preliminary draft of Procedures and Guidelines for Regulated Parties for Establishing New Fuel Pathways Under the California Low Carbon Fuels Standards. Should you have any questions concerning these comments please call me, or Clay Calkin at 925-313-3321.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'Randy Armstrong', with a large, stylized flourish at the end.

Randy Armstrong
Environmental Issues Director



Western States Petroleum Association
Credible Solutions • Responsive Service • Since 1907

Catherine H. Reheis-Boyd
Executive Vice President and COO

August 28, 2009

B. Fletcher, D. Simeroth, F. Vergara, J. Curtis, W. Ingram, M. Singh, J. Duffy, R. Littaua, C. Zhang-Tillman, G. O'Brien, C. Lozo, S. Solarz, J. Yuan, K. Sideco, L. Mitchell
California Air Resources Board
1001 "I" Street
Sacramento, CA 95814
Via electronic mail to addressees

Dear ARB Staff:

Re. Western States Petroleum Association's Comments on the California Air Resources Board's Request for Additional Comments at August 5, 2009 LCFS Workshop

This letter contains comments by the Western States Petroleum Association (WSPA) on information provided to the public during ARB staff's LCFS workshop held August 5. WSPA is a non-profit trade organization representing twenty-eight companies that explore for, produce, refine, transport and market petroleum, petroleum products, natural gas and other energy products in California and five other western states.

ARB staff requested comments on several presentations made during the workshop that provided additional concepts on some of the outstanding program components. Unfortunately, the presentations and subsequent Q&A periods did not provide sufficient details in many cases for us to respond in a definitive fashion. This continues to concern our companies since there is still a lack of demonstrable program feasibility. We are hopeful that additional workshops and meetings will be held in a timely fashion to continue working on this extremely complex regulation, although we still question the overall LCFS viability.

WSPA has provided in the attached, comments on:

- Confidentiality provisions,
- Compliance and reporting tool,
- New fuel pathways – procedures and guidelines,
- Future certification program,
- Credits for off-road electric transportation,
- Electricity – regulated party definition and credits,
- Credit trading issues, and,
- Fee schedule provisions.

Please let me know if you have any comments or questions, or contact my staff Gina Grey at 480-595-7121.

Sincerely,



Western States Petroleum Association's Comments on August 5 LCFS Workshop Issues

Confidentiality Provisions

ARB's treatment of data submitted through the LCFS reporting procedures raises concerns relating to possible disclosure of trade secrets and other confidential business information. Current regulatory language contains no provision for the designation of confidential information submitted to ARB in quarterly and annual reports, and only includes limited protection of confidential data submitted to ARB relating to development of new fuel pathways. It is critical that the LCFS regulation address protection of trade secret and confidential business information submitted to ARB by regulated parties.

"Trade secret" in the proposed LCFS regulation is defined in the same manner as the California Public Records Act ("CPRA"). *See* § 95486(e)(3)(C). The CPRA defines "trade secrets" as including, but not limited to "any formula, plan, pattern, process, tool, mechanism, compound, procedure, production data, or compilation of information which is not patented, which is known only to certain individuals within a commercial concern who are using it to fabricate, produce, or compound an article or trade or a service having commercial value and which gives its users an opportunity to obtain a business advantage over competitors who do not know or use it." Gov't Code § 6254.7.

Much of the information to be submitted to ARB in quarterly and annual reports, as well as data submitted to ARB in applications for new fuel pathways, clearly qualifies as "trade secret" under the CPRA. In addition, ARB regulations directly address how the agency must handle confidential business information submitted by regulated parties. *See* 17 CCR §§ 91010, 91011.

ARB regulations contain specific provisions relating to the treatment of confidential business information. While emissions data submitted to ARB is considered public information, the regulations specify that any person submitting information to ARB may designate information that is not emission data as confidential "trade secret." 17 CCR §§ 91010, 91011. ARB regulations also state that the State Board shall not disclose any such data submitted as confidential "trade secret". 17 CCR § 91011.

Protecting confidential business information, such as the data required to be submitted to ARB under the LCFS, is critical to protecting competitively sensitive business information that is unique to each regulated party, and that is known only to certain individuals in each company. Accordingly, WSPA recommends specific changes to the regulatory language, in order to safeguard the proprietary interests of the regulated parties, and to meet the legal requirements of the California Public Records Act and ARB regulations.

Competitive Information -- Quarterly and Annual Reporting

Much of the data required to be submitted to ARB in quarterly and annual reports is sensitive confidential business information that should be protected from public disclosure. For example, Table 3 on page A-32 of the Proposed LCFS Regulation Order requires regulated parties to submit sensitive information not generally known outside each individual company. This includes the amount of fuel or blendstock produced, the Carbon Intensity (CI) of the fuel or blendstock, and credits and deficits generated each quarter and each year.

The public release of this information would effectively disclose confidential business information to competitors of the regulated parties under the LCFS. The amounts of credits and deficits held by each company are considered extremely sensitive pieces of information in the fuel industry, and public disclosure could affect the credit and fuels markets in California. Even if the total amount of credits and deficits were not disclosed, the disclosure of the total volume of fuels and blendstocks in combination with the CI of each fuel or blendstock would reveal the amounts of credits or deficits held by each company.

Another concern with the quarterly and annual reporting is the use of the Compliance and Reporting Tool (CRT) to report compliance with the LCFS. In ARB's August 5, 2009 slides, the key features of the CRT include possible mass data uploads, and automated credit and deficit calculations, banking and tracking. These features raise concerns about the lack of any ability to mark data as confidential or trade secret in the CRT program, leading to inadvertent disclosures.

It is understandable that some of this information may be necessary for ARB to ascertain the effectiveness of the program. Clearly, ARB is trying to address the need to balance governmental transparency with the need for competitiveness in the fuel industry, as ARB discussed in the LCFS Credit Trading Issues slide presentation on August 5, 2009.

Therefore, WSPA recommends that any public disclosure of the data submitted to ARB in quarterly and annual reports aggregate all data and de-identify the regulated parties, so as to protect confidential information contained in the reports. This is standard practice in the industry and in public reports prepared by the California Energy Commission (the "CEC"). See 20 CCR § 1370 (requiring all unaggregated data collected by the CEC through Petroleum Information Reports to be held in confidence). Also, the CRT program should allow for a user to designate sensitive information as confidential trade secrets in a contemporaneous and effective manner.

Accordingly, we suggest the following language be added to Reporting Requirements section 95484(c), as 95484(c)(6):

(6) *Treatment of Trade Secret Information*

(A) *A regulated party that submits data in quarterly and annual compliance reports, as specified in sections 95484(c)(3) and 95484(c)(4) should identify any confidential data submitted as trade secret, and all such data shall not be considered public records; "trade secret" has the same meaning as defined in Government Code section 6254.7.*

(B) *ARB will aggregate all data gathered from the quarterly and annual compliance reports prior to public disclosure, so as to protect confidentiality of reporting parties. All regulated parties will be de-identified prior to public disclosure of any such data.*

New Fuel Pathways -- Protection of Method 2A and 2B Data Submittals

Another area of concern is the limited protections for confidential business information submitted to ARB in applications for new fuel pathways. Section 95486(f)(2)(A) provides some protection of information identified as trade secret that is submitted in support of a proposed Method 2A or 2B fuel pathway.

However, the current protection of trade secrets in the LCFS regulation is inadequate, as section 95486(f)(2)(B) provides that once an application is approved, the CI values, associated parameters, and other fuel pathway-related information will be incorporated into the Lookup Table and made

public. This provision lacks any clear protections of trade secret and confidential business information that could be made public by incorporation into the Lookup Table.

As ARB is aware and the record of the LCFS rulemaking demonstrates, the development of new fuel pathways is a highly competitive field, where innovation and competition between producers of new fuels is closely linked to maintaining confidential business information. Indeed, one of the main objectives of the LCFS program is to provide strong incentives for innovation in the development of new fuels, which will require ARB to evaluate and approve new fuels pathways.

Based on past ARB programs with similar goals to promote innovation, it is ARB's intent to encourage innovators to disclose proprietary information to ARB on a confidential basis as early as possible in the development of new fuels and their associated production, transportation, storage and distribution technologies. Some of these fuels will be inextricably linked to the development of new vehicles capable of using the fuels, and information about the new vehicle techniques should be eligible for confidential treatment by ARB.

ARB recognizes this need. ARB's LCFS Credit Trading Issues slide presentation on August 5, 2009, noted that a major issue relating to disclosure of data is the need to protect the competitiveness among fuel producers in order to foster innovation that will lead to new fuel pathways. Data relating to new fuel pathways clearly qualifies as "trade secret" under the CPRA definition, as a formula, process, procedure, or production data "known only to certain individuals within a commercial concern." Gov't Code 6254.7(d). *See generally Masonite Corp. v. County of Mendocino Air Quality Management District*, 42 Cal. App. 4th 436, 446 (1996) (holding that information that would reveal "production data" qualifies as a trade secret under Govt. Code § 6254.7(d).).

It is critical that the provisions relating to the development of new fuel pathways assure the non-disclosure of confidential "trade secrets."

Therefore, WSPA suggests the following changes to the language in section 95486(f)(2), to assure that confidential data related to development of new pathways to compliance are properly treated as trade secrets:

- (B) If the application is approved by the Executive Officer, the carbon intensity values, associated parameters, and other fuel pathway-related information obtained or derived from the application *not designated as confidential trade secret* will be incorporated into the Method 1 Lookup Table for use on a free, unlimited license, and otherwise unrestricted basis by any person.
- (C) *All information submitted to support a Method 2A or Method 2B pathway shall be aggregated and applicants will be de-identified, to protect confidentiality.*

Compliance and Reporting Tool

WSPA is concerned about the timing of the availability of the "compliance and reporting tool". Reporting requirements begin in January 2010, and based on the current state of the tool, it appears there will not be a well-vetted product available for our use in time. Further, we want to emphasize that the tool should be simple, should have sufficient confidentiality protections built in, and should be just an accounting tool that aggregates quarterly data. In other words, companies should be able to use the tool as an accounting assist if they so desire, but there should be no requirement that any intermediate entries be made in between the required quarterly reports.

New Fuel Pathways - Procedures and Guidelines for Regulated Parties

Comments on Method 2A Application Process:

- The application should include sufficient data to allow staff to perform an uncertainty analysis (also applies to Method 2B).
- The application should include information on whether or not the proposed changes result in any compositional changes to the fuel and whether or not any such changes impact either greenhouse gas or criteria pollutant emissions when the fuel is burned.
- The document should specify that the energy content of the fuel should be based on lower heating value (pg. 5).
- The removal of the volume-based substantiality requirement for Method 2A modifications to fuels that are produced in total quantities less than 10 million gallons per year is a good idea. This will enable Method 2A changes for new fuels while they are still at the pilot scale, thereby encouraging innovation (pg. 6).
- The scientific defensibility requirement for Method 2A changes should be based specifically on only those CA GREET inputs being modified (pg. 6).
- CARB should reserve the right to determine the acceptability of journals for the purpose of establishing Scientific defensibility (also applies to Method 2B).
- The language of the last bullet on page 7 is not consistent with the regulations as currently written. It should be made clear that any use of the modified value before written approval is a violation. This includes PTD documentation and quarterly reports, not just the annual report (also applies to Method 2B).

Comments on Method 2B Application Process:

- The type of feedstock and feedstock production process should be added to the list of required descriptions (pg. 9).
- The application should include an assessment of the impact of scale on the pathway analysis. Staff should take scale differences into consideration in the determination of the appropriate carbon intensity value so as not to penalize commercial scale projects based on pilot or demonstration scale data. Staff should consider binning new pathways by production rate (e.g., 10-50 Mgpy, 51-100 Mgpy, and 101+ Mgpy).

Comments on Sections III and IV on Indirect Effects:

- It should be specifically recognized that diversion of a feedstock from its current use to the production of a fuel can create an indirect effect due to its replacement by some substitute. In addition, the substitute could possibly have a land use change impact associated with it.

➤ Table 1 contains a number of inaccuracies, including:

1. Fossil CNG and LNG have no land use effects on carbon intensity.
2. Fossil electricity has no land use effects on carbon intensity.
3. Nuclear electricity has no land use effects on carbon intensity.
4. Electricity derived from old solar, wind, and hydro has no land use effects on carbon intensity.
5. Biomass electricity can have land use effects on carbon intensity.
6. Hydrogen produced from fossil fuels has no land use effects on carbon intensity.
7. Hydrogen produced via electrolysis has no land use effects on carbon intensity regardless of the source of electricity.

Future Certification Program

WSPA agrees that streamlining the process for making Method 2A and 2B changes will be beneficial to the program. However, such streamlining should involve enhancements to the procedures as outlined in the guidelines document, rather than eventual replacement of the guidelines document with some other process.

Under no circumstances should adoption of a certification program include the removal of the lookup table carbon intensity values from the LCFS regulations, as was suggested by staff at the August 5, 2009 Workshop. WSPA believes that the lookup table carbon intensity values must be an integral part of the regulations. The carbon intensity values of fuels and fuel components are the currency of the LCFS: all compliance determinations are based on these values. Investment decisions will be made based on these values, and changes to them will create the risk of stranded capital. Therefore, these values should be explicitly included in the regulation, the same way that the Predictive Model equations are included in the CaRFG regulations. Any permanent changes to these values should only be possible through a public rulemaking process.

In furtherance of the technology innovation goals of the LCFS, it is also important to recognize the need for flexibility, especially in the determination of carbon intensity values for novel fuel pathways that are critical to the success of the program. Such cases could perhaps be accommodated by either an expedited rulemaking process or a provision to grant temporary approval until the rulemaking process can be completed.

Credits for Off-Road Electric Transportation

- There needs to be a rigorous method to quantify electricity usage. The preferred option would be direct metering.
- The regulated party should be required to determine which fuel is being displaced – LPG, gasoline, or diesel. Also, if LPG is being displaced, would the credits estimates be based on the gasoline standard?
- Staff needs to develop appropriate EERs for electricity versus the fuel being displaced. This can have a substantial impact on the credits estimates since diesel engines are inherently more efficient than spark-ignited LPG and gasoline engines.
- There should be a requirement that entities wanting to claim credit identify whether a) they have moved into an alternative fuel due to existing federal, state or local requirements; and b)

whether they received any government funding/incentives (in which case they should not be able to claim credit).

Electricity - Regulated Party and Claiming a Credit

- The point of credit generation requires clarification. Slide 3 from the Workshop suggests that LCFS regulation allows credit generation by the load-serving entity, bundled charging infrastructure provider if applicable, owner of charging equipment if contract with electricity provider, and homeowner if there is a contract with the electricity provider. It is not clear who will decide which entity receives the credit for a kWh delivered as fuel and on what basis this decision will be made. Staff should provide greater details on this point.
- WSPA's members' CHP plants are barred by existing law from being "load serving entities" (LSEs) for this purpose. The ability of any party but the utilities to sell electricity to a party for fuel is barred by AB1X, Water Code section 80260. If the point of credit generation is placed at the LSE level, this barrier must be removed to expand competition.
- As discussed in our 30 day comments, ARB appears to be recommending the utilities be off the hook for direct-metering until 2015. Instead, WSPA believes direct-metering should be required to encourage installation of infrastructure. Since Advance Metering is being deployed by 2012, there's no apparent reason why it can't be deployed with a vehicle submetering option.
- A key issue has always been the generation mix that is assumed to serve the vehicles (e.g., renewable, coal, gas-fired). This issue is important, so ARB staff needs to address this further before the state moves forward.
- Related to 4, it could be argued that ARB may be double counting AB 32 reductions if ARB is relying on renewable generation in the resource mix. The RPS program, up to 33%, already has a Scoping Plan target, and that target is assumed to be separate from the LCFS target. If, however, the load forecast used in developing the GHG savings for the RPS program already assumed increased PEV penetration, there would be double counting. WSPA doesn't know how the forecast was developed, but assumes it was based on a forecast assuming some growth in PEVs. We request that ARB provide us with additional details.

Credit Trading Issues

What should the credit trading provision accomplish?

ARB should develop, through the LCFS regulations, a simple and workable credit market. Our members has read and heard varying versions of what ARB staff is suggesting.

Some have interpreted the existing regulations to indicate that ARB is attempting to do this by allowing credits that are generated in a compliance period to be traded before the end of the compliance period. Others heard at a workshop that credits be "submitted" in the quarterly report before trading.

In addition, some understand ARB wants to provide flexibility and supply of credits by incorporating the ability to buy and sell credits based on the projected credit balances for the compliance period. Others have heard ARB indicate that credits can only be traded after they are "submitted", meaning they can only come from prior compliance periods.

WSPA suggests the regulations should be revised to allow obligated parties to trade credits after a compliance period has ended to meet their obligation for that period. If ARB does not provide for this flexibility, then the supply of credits will always be lagging behind the market demand by one compliance period. This in turn could lead to higher credit prices and increased cost to obligated parties and consumers with no benefits.

What is ARB's Role in the LCFS Credit Market?

WSPA recommends that ARB should look at the U.S. EPA credit trading regulations for RFG Benzene credits, gasoline sulfur credits, motor vehicle diesel fuel sulfur credits, and MSAT II benzene credits when defining its role in the credit market. All of these existing credit markets function well and smoothly with minimal EPA involvement. In these programs, the EPA accounts for compliance by checking the reports submitted by buyers and sellers for consistency. Similarly, WSPA strongly recommends that ARB's role in the LCFS credit market be limited to compliance validation. ARB should not provide clearing services or facilitate trades.

ARB should also review the U.S. EPA credit trading regulations concerning invalid credits. To protect the buyers of credits, EPA regulations require that sellers must use their valid credits to meet their credit sales obligations before meeting their compliance obligation or use for banking (see CFR 80.67 (h)(3)(iii) "Where any credit transferor has in its balance at the conclusion of any averaging period both credits which were properly created and credits which were improperly created, the properly created credits will be applied first to any credit transfers before the transferor may apply any credits to achieve its own compliance"). WSPA also suggests ARB consider regulatory language requiring both obligated and non obligated parties that sell invalid credits to purchase valid credits or incur a deficit in order to replace any invalid credits that they sold to obligated parties.

In summary, ARB's involvement should be limited to:

1. Normal compliance checking of annual compliance reports
2. Normal compliance checking and matching of credit purchases and sales.

What trading data should ARB collect and what data must be protected in order to assure a sound credit trading market?

ARB should limit its trading data collection to annual reporting of:

1. Names of buyers and sellers of LCFS credits along with the number of credits and the vintage of the credits, and the transaction date. WSPA would support ARB's listing of the names and contact information of buyers and sellers (not identified as either) for those parties that voluntary choose to submit this information to CARB for posting.
2. ARB must limit data disclosure to industry aggregated data. Disclosure of LCFS credit market data in total market aggregate and industry aggregated level will provide sufficient information for parties to understand how well the LCFS market and the regulation is functioning. Company specific credit data such as balances, purchases/sales volumes and prices, and transaction partners is confidential business information and disclosure of company specific data could cause competitive issues and risk seriously disrupting the LCFS credit market.

To be clear, WSPA wants to state that there should be no reason for ARB to collect purchase/sell price information and we are opposed to this.

WSPA strongly suggests that ARB establish a working group of regulated parties and key stakeholders to develop clear rules for how to buy and sell LCFS credits at minimum administrative burden and cost. The system should build on existing credit trading programs such as the U.S. EPA Reformulated Gasoline Benzene credit, gasoline sulfur, and motor vehicle diesel fuel credit programs.

Fee Schedule Provisions

Due to the lack of any definitive information from ARB regarding a proposed fee schedule for the LCFS program, WSPA declines to comment on this subject at this time. However, WSPA expressly reserves the right to provide such comments once more information on any proposed fee schedule is forthcoming.

Without prejudice to the foregoing, WSPA notes the ARB Office of Climate Change is developing its own AB 32 administrative fee, currently scheduled for adoption by the Board in September. Before proceeding with a separate fee or charge related to LCFS regulatory work, the LCFS program staff and the Office of Climate Change need to provide clarity and certainty, at a minimum, that PYs and contracts associated with certification of new fuel pathways are not being included in the funding base for both fees.

Further, any fee associated with certification of new fuel pathways would need to comply with basic legal fee requirements, including reasonable nexus between the fee, the fee payer, and the funded regulatory activity, and a fair apportionment of the fee among fee payers.

Finally, it will be helpful to those providing comments on any LCFS fee proposal for the LCFS regulatory staff to provide an estimate of program costs (including PYs, contracts, and other costs) for pathway certification, other LCFS regulatory activity, and LCFS enforcement activity, for the current and any future fiscal years for which estimates are available.



11 Good Energy

February 19, 2010

Chairman Mary Nichols
California Air Resources Board
1001 I Street
Sacramento, California 95814

Re: "Draft Establishing New Fuel Pathways under the California Low Carbon Fuels Standard: Procedures and Guidelines for Regulated Parties"

11 Good Energy, Inc. is a manufacturer and distributor of an innovative form of biodiesel fuel called G2 Diesel. G2 Diesel offers improved fuel efficiency and associated carbon reduction emissions per mile, as well as reductions in NOx emissions, and the elimination of most of the toxic byproducts generated during the conventional biodiesel production process.

11 Good Energy commends the Air Resources Board for adopting the Low Carbon Fuel Standard (LCFS) last April and taking on the many challenging issues surrounding the goal of reducing the carbon emissions of liquid transportation fuels. In addition, we appreciate the Air Resources Board and staff for continuing to work with us and other stakeholders in the development of the Carbon Intensity Lookup table and guidelines for establishment of new fuel pathways to comply with the Low Carbon Fuel Standard.

The preliminary draft of the procedures and guidelines for establishing new fuel pathways includes methods to apply for a new fuel pathway and sub-pathway. Currently, there is a fuel pathway for biodiesel from soybeans. However, the conventional biodiesel production process uses methanol as an input and generates toxic byproducts. Conventional biodiesel (ASTM 6751) produced by the traditional process contains less energy than petroleum-based diesel and increases NOx emissions.

11 Good Energy has developed an innovative process for the production of biodiesel that eliminates toxic emissions and waste. These pollution prevention benefits are achieved by not using methanol and avoiding the traditional intensive washing and heating of the fuel. The 11 Good Energy process uses an efficient catalytic process to blend soy oil with ethanol to yield a cleaner, lower carbon fuel. 11 Good Energy's unique production process dramatically reduces production time compared to the conventional biodiesel production process. And our process dramatically reduces labor, capital costs, and energy inputs. Specifically, the production of G2 Diesel uses substantially less energy inputs than the conventional biodiesel production process. The substantial GHG emission reduction benefits warrant a new fuel pathway for our high-performance, low carbon fuel, called G2 Diesel.

G2 provides more energy than the current biodiesel fuel standard because it burns cooler and cleaner, which means less energy lost to heat and more energy converted into combustion. More complete combustion creates more energy per gallon, resulting in up to 25% better fuel economy, thus reducing carbon emissions per VMT.

11 Good Energy, Inc., 11194 Imperial Road, Magnolia, OH 44643

Chairman Mary Nichols
California Air Resources Board
February 22, 2010
Page 2

The fuel economy savings exceed the incremental costs of G2 compared to conventional diesel. Thus, G2 offers a net cost savings for diesel customers, allowing market forces will help drive large scale deployment of this high-performance biodiesel to truck and transit fleets, as well as individual consumers.

G2 Diesel is a ready-to-use formula that does not require retrofitting diesel engines in order to use the product. Truck engines can use up to 20% G2 Diesel blend, and other diesel engines can use up to 100% G2 Diesel with no retrofit.

The 11 Good Energy G2 production process is scalable to meet a very large portion of California's demand for cost efficient, low carbon diesel. Recently, our Magnolia Plant went into full production and is now producing G2 Diesel fuel with an annual capacity of 13,500,000 gallons. Production capacity is growing to meet growing demand, including a new plant with a projected annual capacity of 58,000,000 gallons being developed in the coming months.

We understand that one of the most challenging components in developing fuel pathways is the assessment of indirect land use changes (ILUC), particularly in relation to the use of traditional feedstock. We are well aware of the complexity surrounding the methodology for calculating ILUC and agree with the ARB's approach of establishing an Expert Workgroup to assist the Board in refining and improving the methodology for analyzing land use and indirect effects from the production of transportation fuels.

11 Good Energy's innovative production process can substantially improve carbon emission reductions per VMT, as well as other emissions, while using feedstocks that are available now. G2 can play a significant role in achieving the Low Carbon Fuel Standard and help maintain California as leader in the deployment of innovative fuels.

We look forward to working with ARB staff to develop a new fuel pathway for this substantially different fuel with incredible potential today, the immediate future and beyond to help cost-effectively implement the LCFS.

Sincerely,



Frederick C. Berndt
CEO and Chairman
11 Good Energy



BP America, Inc

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

DATE: February 5, 2010

Via Email

Bob Fletcher
Deputy Executive Officer
California Air Resources Board

Re: January 20, 2010 LCFS Workshop

Dear Bob,

BP America, Inc. submits the following comments on the issues discussed at the January 20th California Air Resources Board (CARB) Low carbon Fuel Standard (LCFS) Workshop.

Section I. Biofuel Registration

Registration Process

CARB has indicated a widespread biofuel producer registration as their preferred approach to verifying lifecycle carbon performance of different biofuel volumes. The proposed registration process has been suggested by CARB as mandatory for biofuels producers despite the fact that most of these producers are not under the direct jurisdiction of CARB.

We believe the best mechanism to ensure that production facilities are registered is to require regulated parties to source all imported biofuels from CARB registered production facilities. With such an approach, the registration of the biofuel producers would be managed within contract language between the biofuel provider and the regulated entity. BP recommends that this requirement be phased in over several years.

Recognizing that the education and registration of a large numbers of industrial facilities may take time, BP also recommends that CARB formally establish a methodology for assigning default values that can be phased out as the supply chain restructures to accommodate additional information flows.

Physical Pathway

The Draft Biofuel Producer Registration Form requires the initial demonstration of a physical pathway in addition to carbon intensity (CI) determination. Biofuel producers should not be the responsible party for this initial physical pathway demonstration. In many cases, biofuel producers are not aware of the final destination of their fuels, and therefore are not the party most capable of generating this information. Furthermore, many biofuel producers may view this requirement as a barrier and deterrent to the registration process.

The party who is most capable to demonstrate the fuel's initial physical pathway is the party that imports the fuel into the state. Because they are more likely to have awareness or control over the transport of the product that they buy, importers are better capable of gathering and supplying this information to CARB. The importer, who by definition is a regulated party, already has an obligation to report to CARB. The physical pathway demonstration should be the responsibility of the importer when the first transactional volume is logged with any registered producer.

Personal vs. Corporate Liability

Language in the Legal Responsibility section of the biofuel registration form does not distinguish whether the liability incurred by the signing entity is personal or corporate. CARB should state explicitly that it is corporate liability. When CARB was designing the registration for regulated parties, a similar ambiguity emerged for compliance demonstration. At that time, CARB verbally clarified the language to specify that the liability incurred was corporate. BP requests similar treatment for the biofuel registration form.

Section II. New Fuels Pathway Registration

Construct and publish a strategy for disclosure and protection of Intellectual Property (IP) for low carbon technologies

The LCFS was designed to encourage innovation in low carbon fuels. In order for new technologies to be rewarded in the intended manner, those carbon benefits have to be substantiated to CARB. However CARB has not clarified how it will protect the IP of companies as they demonstrate these benefits.

BP requests that CARB issue a document clarifying specific processes and systems to protect commercially sensitive intellectual property. This strategy should address any type of commercially sensitive information which CARB anticipates might be required by a regulated party to substantiate carbon benefits as part of 2A or 2B Methodologies. This includes but is not limited to proprietary technology and commercially sensitive information related to commercial operations. CARB should anticipate potential vulnerabilities and propose how they envision addressing them.

Reversible Agricultural Practices

In describing the Method 2A evaluation criteria, CARB indicated that the carbon benefits of improved agricultural practices will not be granted a sub-pathway if

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they are deemed “easily reversible” from one planting season to the next. With this approach, CARB misses an opportunity to impact on-farm innovation. As an example, double cropping would be a way in which farmers could supply additional resources from the same acreage of land into commodity markets. These kinds of improvements in both direct and indirect CO₂ emissions will only be affected by the LCFS if you consistently reward practices that create those benefits, not only those that involve large capital investments.

BP recommends CARB consider and encourage 2A Methodology applications that are based upon improved agricultural practices. Processes for on-farm verification of reversible practices should be integrated into the Method 2A approval process.

Additions to Core Pathways

CARB has indicated that the pathways which they have developed to date comprise what they regard as the “Core Pathway” and that lifecycle carbon intensity scores for additional pathways will be the responsibility of fuel providers. BP offers the following recommendations for important additions to CARB’s core pathways.

1) Include Caribbean Basin Initiative sub-pathways for all three existing sugarcane CI pathways

Use of the Caribbean Basin Initiative (CBI) is an important consideration for imported sugarcane as most of the Brazilian Ethanol entering the state of California was under the CBI in 2009. At the January 20th Workshop, CARB staff stated that CBI sugarcane would need its own pathway which would need to be determined by CBI asset owners using Method 2B.

Due to its prevalence in the sugarcane market, BP believes that CBI sugarcane should be designated as a Core Pathway. Regulated parties or CBI dehydration facilities that believe that they are differential to the CBI average can initiate a 2B Methodology to distinguish their product if they are motivated to do so.

2) Publish Carbon Intensities for Cellulosic Biofuel Pathways

CARB indicated that for any carbon intensity pathway that is not included in the core lookup table, it will be the responsibility of the fuel producer to initiate a Method 2B application. BP believes that it should be a top priority for the CI values for cellulosic biofuels to be included in the core look-up table, and would request that CARB release a timeline for completion. We are happy to meet with CARB to discuss our concerns and learn of efforts CARB may have underway.

BP believes that the establishment of this pathways should be a critical priority for CARB for the following reasons:

- a. The LCFS was constructed with the assumption that 10% reduction could only be achieved with volumes of cellulosic

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biofuels. The compliance scenarios constructed by staff all included large volumes of cellulosic biofuels.

- b. The publication of a value will also allow for more certainty to obligated parties in predicting the potential compliance requirements.
- c. The cellulosic industry needs regulatory certainty today to know how our product will be treated in the California fuels market. Many new pilot plants have been announced this year and BP's joint venture will break ground on its first commercial scale cellulosic plant before the end of 2010. CARB should acknowledge the emergence of this industry and anticipate that volumes of these low carbon fuels will begin coming into California in the short-term.

3) Increase Core Pathways for Crop Based Biodiesel and Renewable Diesel

CARB has proposed numerous pathways for renewable and biodiesel based on recycled material, but has released only one lifecycle pathway for a crop based feedstock (soy). CARB needs to develop pathways for renewable and biodiesel from crop based feedstocks that are commercially available today.

Section III: LCFS Sustainability Work-plan

The overall framework presented in this plan is very high level. BP looks forward to continuing in dialogue with CARB as more detail on this program is developed. We believe that it is possible for CARB to create a sustainability program that is balanced and credible.

BP's Overall View on Sustainability Frameworks

BP supports the idea that sustainability frameworks encourage better environmental performance over the long term by increasing awareness of the environmental impacts of industry and rewarding better performance. In order to do this effectively, sustainability systems need to be:

- practical and clear in the benefits that are sought
- explicit about how they can be demonstrated
- flexible as to how they can be achieved.

Importance of Performance Based Approach to Sustainability

In a manner consistent with the overall LCFS program, CARB should ensure that any sustainability program avoids reliance on specific agricultural or operational practice-based approaches. Such an approach misses the opportunity to cultivate innovation on-farm or within the industry. CARB should consider defining quantitative objective measurements by which sustainability should be accounted for. For example, in order to account for soil carbon, farmers could measure actual levels rather than specifying agricultural practices that would improve those practices. With a performance based approach, farmers who develop new

BP America, Inc

Comments to California Air Resources Board on LCFS

practices will be able to objectively demonstrate the same outcome using innovative methods.

Chain of Custody

BP believes that any system to track sustainability attributes should avoid adding additional significant complexity to the compliance reporting tool which CARB is developing.

Include US Agricultural Groups within the California Workgroup

BP suggests that CARB actively solicit input and participation from agricultural stakeholders who will be key to supplying biomass for low carbon biofuels. Although important to monitor global efforts around sustainability, we believe that alignment with the USDA as well as General Farm Organizations at the federal level will be the best way to create a program that can both serve as leading model and maintain compatibility with federal efforts.

Benchmarking and Certification

Within the scope of workgroup activities CARB should distinguish more clearly between baseline measurements and benchmarking requirements within the overall sustainability program, including:

- What baseline measurements (the initial measurement against which improved performance will be compared) are meaningful?
- What value benchmarking (comparing California criteria and indicators against another set of criteria and indicators) would provide to the program.

The CARB Sustainability Workplan appeared to group these two concepts together in a way that made it difficult to tell how each would be employed within the scope of workgroup activity.

Please feel free to contact me to discuss these issues in more detail.

Sincerely,

Ralph J. Moran
BP America, Inc

Cc: Dean Simeroth



BioEnergy Producers Association
Clean Technology for Renewable Energy

James L. Stewart
Chairman of the Board

David Roberti, Senator (Ret.)
President

Kay Martin
Vice President

February 5, 2010

Dr. Wes Ingram
Stationary Source Division
California Air Resources Board
1001 "I" Street,
Sacramento, California 95814

Subject: Comments regarding LCFS Guidelines

Dear Dr. Ingram:

The BioEnergy Producers Association is a coalition of private and public entities dedicated to the development and commercialization of environmentally preferable industries that produce renewable sources of power, advanced biofuels and chemicals from agricultural, forestry and urban biomass, and plastic wastes. Our membership includes biobased technology providers, electric utilities and waste management companies.

We are in receipt of the ARB's "Draft Procedures and Guidelines for Establishing New Fuel Pathways under the California Los Carbon Fuel Standard." We would like to submit the following comments for consideration.

Among the actions ARB staff was directed to take in implementing the Low Carbon Fuels Standard was the creation of an informal set of "criteria and a list of specific biofuel feedstocks that are expected to have no or inherently negligible land use effects on carbon intensity" (Air Resources Board Resolution 09-31, April 23, 2009, p. 15).

That list appears as "Table 1: Fuels Expected to Have No or Inherently Negligible Land Use Effects on Carbon Intensity" in the Draft Procedures and Guidelines. As presented, this table could be construed to imply that only the examples listed would be considered as eligible fuels/feedstocks by the ARB. We are concerned that this list fails to acknowledge the wide potential of organic wastes, in particular, municipal solid wastes, as feedstocks for the production of advanced biofuels, including ethanol.

Dr. Wes Ingram
February 5, 2010
Page Two

As non-food derived resources, carbon-based wastes represent the nation's most promising and virtually untapped renewable energy source. These are materials which otherwise would be destined for landfills, and which do not require the expenditure of land, water resources and energy (and thus, any perceived direct or indirect land use impacts, however limited) that are inherent in purpose-grown cellulosic plant materials.

For this reason, representatives of the Air Resources Board have confirmed that, on a life-cycle basis, the production of ethanol from organic wastes is one of the only pathways that can absolutely meet or exceed the GHG reduction requirements of California's new low carbon fuel standard.

It is variously estimated that every year, the United States generates between 1.5 billion and 2.0 billion tons of municipal solid waste, biosolids, animal wastes, green wastes, food production and pulp paper wastes, plastics, auto shredding residues, agricultural residues, forest thinnings and other organic wastes—some 500 million tons of which are *readily available* for conversion to energy in our local communities. Post-recycled residual MSW, for example, is a versatile feedstock that can be utilized to produce electricity and an array of biofuels including ethanol, biodiesel, and hydrogen.

Theoretically, 21st Century conversion technologies, which will be commercially proven and a recognized factor in the nation's energy mix within the next two years, could produce enough ethanol from these resources to eliminate the nation's need to import petroleum, while making a significant contribute to greenhouse gas reduction.

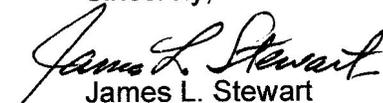
We draw your attention to the enclosed power point presentation of Renee Littaua, Manager, Fuels Section, of the Air Resources Board, which calls for the "increased use of biofuels from waste materials" in achieving ARB's goals for the LCFS, and projects the need for 24 new potential commercial scale biofuel facilities in California by 2020.

We would recommend that, as part of "Table 1," your agency establish a separate list of organic waste materials that are acknowledged to have "no or inherently negligible land use effects on carbon intensity" and therefore are eligible feedstocks for the production of *any* types of biobased fuels.

In approving the LCFS, the Board directed the Executive Officer to work with stakeholders to define the terms "biomass" and "renewable biomass." We strongly urge that "municipal waste that has been recycled to the maximum extent feasible" be included in that definition.

We respectfully request that these comments and the attached power point presentation be placed in the record of public comment regarding the LCFS guidelines. Thank you.

Sincerely,


James L. Stewart
Chairman of the Board



February 5, 2010

Mary Nichols, Chair
California Air Resources Board
Headquarters Building
1001 I Street
Sacramento, CA 95812

RE: New Fuels Alliance Comments Regarding California LCFS New Fuel Pathways and High Carbon Intensity Crude Oil

Dear Chairwoman Nichols,

The New Fuels Alliance (NFA) appreciates the opportunity to provide written comments to the California Air Resources Board (ARB) relative to the Low Carbon Fuel Standard (LCFS) as contained in the January 20, 2009 Concept Paper titled "*Draft/Establishing New Fuel pathways Under the California Low Carbon Fuels Standard/Procedures and Guidelines for Regulated Parties*" (Concept Paper).

NFA is a national, not-for-profit organization that educates political leaders, regulators, public interest groups, businesses, and the general public about the economic, environmental and other benefits of non-petroleum fuel production and use. Its organizational purpose is to bring together the wide range of groups and sectors that are stakeholders in the development of non-petroleum fuels to build a broad and diverse base of support for a more sustainable fuel-energy future in the United States.

As you may know, NFA has been an active participant in the LCFS process, and supported the concept when the Governor first unveiled it in 2007. However, NFA strongly disagrees with ARB's approach to certain program design elements of the LCFS, particularly as they relate to system boundaries, asymmetrical carbon accounting, modeling and the treatment of petroleum. While it is not the intent of the comments below to rehash our position on these key issues, it is inevitable that certain arguments NFA has put forth in previous comments will again apply here. NFA appreciates ARB's continued work on the LCFS and encourages ARB to process the comments below through the lens of creating a durable regulation that treats all fuels equally.

1. Additional Information Required for Stakeholders to Assess Methods 2A/2B

The Concept Paper issued by ARB lacks substantive discussion, transparency and background on several matters. Without proper information put forth by ARB, it is extremely difficult to understand how and/or why ARB made certain determinations. This poses significant challenges to fuel producers, investors and other stakeholders because there is no guidance as to the rationale for the proposed regulation, which limits opportunities to move forward with potential changes to fuel pathways. NFA respectfully requests ARB to provide the following information promptly and with supporting documentation, when necessary:

- 1) The Concept Paper (pg. 8) discusses, as part of the evaluation criteria of a new sub-group pathway, the issue of substantiality. Specifically, ARB states that “a new sub-pathway will only be approved if the applicant can demonstrate that the volume of fuel that will be produced using the proposed sub-pathway will rise to at least ten million gasoline-gallon-equivalents per year within about five years from the onset of production.” ARB defines the ambiguity of “about five years” with further uncertainty by acknowledging that in some circumstances “a somewhat longer time horizon may be acceptable.” How and why did ARB determine the ten million gasoline-gallon-equivalents per year volumetric requirement for this section? Also, why did ARB propose a five year threshold for this section, and under what circumstances would that time frame be flexible?
- 2) The Concept Paper (pg. 9) states that “applicants must demonstrate that the proposed new sub-pathway will yield a carbon intensity improvement of at least five gCO₂e/MJ over the existing sub-pathway to which the proposed sub-pathway most closely relate(s).” While it makes sense that ARB would not want to review each and every proposal that demonstrated limited carbon reductions from a new fuel pathway, NFA seeks clarity on how ARB determined the five gCO₂e/MJ number. Also, why does ARB believe that a new sub-pathway with improved carbon intensity (predicted with a high level of certainty), for example 4.99 gCO₂e/MJ, should not get credit for that benefit and instead be relegated to a higher CI score previously determined in the Lookup Table? As a point of contrast, ARB is proposing that petroleum can increase its carbon intensity by roughly 7 gCO₂e/MJ (up to a threshold of 15 gCO₂e/MJ for production and transport) and nonetheless receive the Lookup Table value that does not reflect this increase. NFA requests ARB to explain the inconsistencies here, and provide scientific support for these allowances. It does not seem prudent to turn a blind eye to 4.99 gCO₂e/MJ carbon intensity improvements, or 7 gCO₂e/MJ petroleum backsliding.
- 3) The Concept Paper (pg. 9) discusses the requirement for new pathways to be scientifically defensible and indeed sets the minimum standard for scientific defensibility to be the same type of data and analysis that led to the existing values established in the Lookup Tables. ARB states that the “strength of the scientific and technical data behind those lookup table values” is the baseline and that new pathways must at least meet the “robustness” of the analysis that led to the creation of the Lookup Table numbers. However, it is not clear what this means. On the one hand, ARB has assessed indirect land use change (iLUC) adders to biofuels based on peer-reviewed modeling. On the other hand, they have assigned a zero value for the indirect effects of other fuels without doing any economic modeling of these fuels and despite peer-reviewed and otherwise credible analysis submitted to ARB suggesting that other fuels indeed have indirect effects. NFA has on numerous occasions specifically requested ARB to document how it made the determination that petroleum and other fuels do not have indirect effects. NFA requests the following: 1) any scientific, technical, and modeling data on how it made its determination that petroleum and other non-biomass derived fuels do not have significant indirect impacts; 2) all research on the land use and/or indirect effects of other fuels conducted or submitted to ARB; 3) how ARB can state that the Lookup Tables represent a robust analysis of scientific and technical data when key indirect effect investigations have not been conducted, according to the

public record; and, 4) what, for practical purposes, the standard really is when it comes to robustness.

- 4) In numerous examples throughout the Concept Paper, ARB states that the appropriate carbon intensity determination tools are “CA-GREET and GTAP (or an equivalent tool).” NFA and many other stakeholders have expressed serious concerns with GTAP. While the Concept Paper notes the use of “an equivalent tool”, presumably one that is comparable to GTAP, ARB offers no insight into what would comprise an acceptable alternative model for this assessment. Has ARB identified an alternative model, and if so, what is it and how might it be accessed by stakeholders? If ARB has not determined what “an equivalent tool” is, NFA requests ARB to provide guidance as to what constitutes an acceptable alternative.
- 5) The Concept Paper also notes that applications for new fuel pathways must discuss the potential for “significant land use change impacts or other indirect impacts.” As discussed, ARB has failed to disclose or document any examples in which it investigated any indirect effects outside of land use change for any pathways other than biofuels. Therefore, NFA seeks clarification as to what other indirect impacts an applicant would be required to disclose as part of a satisfactory Method 2A/2B submission.
- 6) ARB states in the Concept Paper (pg. 12, 20) that any proposed new or sub-pathway that entails indirect carbon effects will require a public hearing to be conducted before ARB, as opposed to the Executive Officer (which conducts hearings for pathways not deemed to create indirect effects). Why is ARB requiring that it conduct all public hearings in matters involving indirect effects? As the analysis of indirect carbon emissions matures, as it inevitably will, and indirect effects are identified for all fuels under the LCFS, is ARB prepared to require public meetings for all alternative pathways?

2. ARB’s Proposed Treatment of High Carbon Intensity Crude Oil is Arbitrary and Will Allow the Use of Significant Volumes of HCICO Without Penalty

It is unclear how high carbon intensity crude oil (HCICO) will be identified in the marketplace and evaluated as part of the LCFS program. ARB has proposed, without public workshop or substantial supporting documentation, a compliance regime for petroleum that could result in significant quantities of HCICO qualifying as average petroleum. NFA has contacted ARB with specific questions about the treatment of petroleum in the LCFS and has been told that an “Advisory White Paper” will be released that will further delineate HCICO issues. NFA welcomes this additional information to be included in the public record. In the meantime, NFA seeks ARB responses to the questions and concerns outlined below:

- 1) It appears from the Concept Paper (pg. 28) that finished fuel from eight countries/regions (California, Alaska, Saudi Arabia, Ecuador, Iraq, Brazil, Mexico, and Angola) will automatically receive carbon intensity values pre-determined in the Lookup Table, irrespective of how the fuel was produced, because crude from these regions comprised at least two percent of the total California oil mix in 2006. It is important to note that the country or region of origin does not necessarily dictate the carbon profile of a gallon of crude. Indeed, some countries like Saudi Arabia and Iraq are transitioning away from light, sweet crude to heavier, sour crude. NFA requests clarification as to why ARB made the determination that country or region of origin is a more effective way to

base carbon values, as opposed to (for example) developing a set of fuel characteristics that refiners must not deviate from to qualify for the average petroleum CI value.

Furthermore, the Concept Paper (pg. 28) does not provide guidance for how ARB would make the determination that a gallon of fuel qualifies as a being included in the 2006 California baseline crude oil mix. In other words, it is unclear how much crude, on a percentage basis, from a country or region that is included in the 2006 California oil mix average would be required to comprise a gallon of fuel that qualifies for the average Lookup Table value, or how this would be enforced. NFA requests ARB to outline what specific percentage or threshold would determine that a gallon of fuel was “derived” from a particular country or region. Also, does ARB intend to require petroleum companies to disclose country of origin of crude for enforcement or verification purposes? If this chain of custody is not disclosed, how will ARB enforce the provision?

- 2) ARB has proposed a three step screening process for crude that is not part of the 2006 California baseline crude oil mix. The Concept Paper (pg. 28) notes that ARB will develop a “conservative” list of criteria, but fails to define what exactly that means and how it will be applied. Further, in the example list of criteria outlined (pg. 29), ARB does not provide any insight as to how the fuel criteria were developed. How and why did ARB develop the numbers and thresholds for the five example criteria? Also, if the examples from the Concept Paper are not intended for adoption, how will ARB determine the specific criteria that would classify a gallon of crude as either low or high carbon intensity, and will that be conducted as part of a public process? In addition, ARB states that crude oils not meeting all of the established criteria “will undergo a more rigorous screening” to determine its carbon intensity classification. NFA requests ARB to explain specifically what a “more rigorous screening” process would include and if the process would be conducted in a public forum.
- 3) ARB has stated in the Concept Paper and the Final Statement of Reasons (FSOR) that petroleum that exceeds 15 gCO₂e/MJ for its production and transportation would have to assess and use its actual (higher) CI value. This is the primary trigger for HCICO. The current score for petroleum’s production and transport is 8.07 gCO₂e/MJ. As such, petroleum is afforded a buffer or leniency of 6.93 gCO₂e/MJ prior to the application of HCICO rules. NFA seeks clarity into ARB’s rationale for providing this significant leniency provision for petroleum. Specifically, why did ARB include this provision in the program and how did regulators determine the related numbers? If 8.07 is an average, and 15 g/MJ is determined to be the first reasonable point outside of that average, please provide the data supporting this conclusion. It also appears that this threshold is not going to be enforced rigidly. The FSOR (pg. 24) notes that crude oil produced using thermally enhanced oil recovery (TEOR) techniques has an average production and transport carbon score of 18.89 gCO₂e/MJ. While this is clearly above the 15 gCO₂e/MJ threshold, ARB states that it will nonetheless receive the Lookup Table CARBOB average score of 95.06 gCO₂e/MJ because ARB *assumes* that AB 32 will require TEOR refineries to adopt mitigation measures reducing their production and transport emissions below 15 gCO₂e/MJ. This is an arbitrarily, policy-induced assumption that could be applied to any fuel based on policies that incent carbon emissions reductions, and renders the 15 gCO₂e/MJ threshold virtual in nature. There is also no scientific support presented for this assumption. Why did ARB make this policy assumption and what data were used to

support this assumption? According to a report NFA submitted to CARB (see below), TEOR petroleum has an actual carbon score of 109 gCO₂e/MJ. This means that based on the current proposal, a 109 gCO₂e/MJ petroleum fuel would receive a 95.06 gCO₂e/MJ CARBOB average score. This is the equivalent of a 15 percent leniency provision for TEOR. What is ARB's rationale for providing this type of leniency?

- 4) In early 2009, NFA provided ARB with a report outlining several petroleum fuel pathways.¹ The report, which was funded by NFA and conducted by some of the same researchers at Life Cycle Associates that worked with ARB on the LCFS program, has been repeatedly mischaracterized by ARB staff as showing no significant indirect effects for oil (in fact, the report does not provide economic analysis of oil but states that it can and should be done). Either way, the report demonstrates that individual pathways can be assessed for oil, in the same way they are assessed and identified for biofuels. Did ARB conduct its own analysis of petroleum, including but not limited to individual pathways such as oil sands, tar sands and heavy crude, and if so, is it available for public review? If ARB has not conducted such an analysis of petroleum, does it intend to do so?

3. Supply-Chain Accountability Must Be An LCFS Requirement For Oil, especially HCICO, to Avoid LCFS Ineffectiveness and Gaming

To achieve meaningful, verifiable and durable carbon reductions in the LCFS program, ARB must gain a full understanding and appreciation of the direct and indirect effects associated with the production and use of petroleum. A clear picture of petroleum's carbon impacts must emerge quickly because as the baseline fuel, it is the standard to which all compliance fuels are measured against. As discussed, ARB's treatment of petroleum is ambiguous, lacks transparency and does not compare equitably to the regulations and requirements imposed on biofuels. To that end, NFA makes the following recommendations, and requests ARB to respond to the viability of each, and to provide rationale as to why, or why not, they will be adopted for program implementation:

- 1) **In the event that ARB maintains its "country of origin" approach to HCICO and petroleum assessment, NFA recommends that ARB require petroleum companies to fully disclose extraction, production and distribution methods, as well as country of origin for LCFS eligibility.** While the country of origin of petroleum can provide some important insights as to the profile of certain crude oils, the carbon impacts of HCICO, and indeed all petroleum fuels, it cannot be solely determined by this process. Rather, a variety of factors influence the ultimate direct GHG emissions, such as type of oil, extraction methods, flaring techniques and distribution sources. If ARB wants to allow oil companies to use fuels with certain country of origin without limitation under the LCFS, there should substantive and transparent protocols to ensure that this oil does not get more carbon intensive over time.
- 2) **ARB should eliminate geography, or country of origin, from its assessment of petroleum's carbon intensity and rather develop a standard that accurately reflects the carbon profile of 2006 California crude oil mix, as an alternative to Recommendation #1.** ARB appears to have taken the first step toward delineating this standard by identifying fuel specifications (p. 29) that generally reflect today's

¹ http://www.newfuelsalliance.org/NFA_PImpacts_v35.pdf

petroleum characteristics. ARB should take this process a step further. It should initiate a stakeholder process to identify the half dozen or so fuel characteristics that will establish a reasonable system boundary around today's fuels. Oil refiners must stay within these boundaries, or face an alternative pathway requirement (including HCICO). This would allow regulators to ensure that oil companies do not use more carbon intensive petroleum free of charge under the LCFS.

- 3) **NFA recommends that the screening process for petroleum, as outlined in the Concept Paper (pg. 29), include a public hearing and ARB review/approval process if any indirect effect is identified.** ARB has proposed that any new fuel pathway that is determined to have indirect land use change implications automatically triggers a public hearing and ARB review and approval process. If ARB is to maintain this requirement for one type of indirect effect (land use change), it is imperative that a consistent standard is applied to all fuels applying for alternative pathway treatment. As such, any fuel seeking an alternative CI value that is shown to have indirect effects of any kind should be required to comply with the same process as iLUC. This is the only consistent way to deal with indirect, market-mediated effects, and should be made explicit by ARB, even if other indirect effects are identified down the road or by the expert working group.

Thank you for the opportunity to provide comments on these matters as they relate to the LCFS program. Please let us know if we can answer any questions you may have.

Sincerely,



Andrew Schuyler
Regional Director
New Fuels Alliance



February 5, 2010

Robert Fletcher
California Air Resources Board
1001 "I" Street
Sacramento, CA 95812

Mr. Fletcher,

Please accept this letter as comment related to the materials released at the January 20, 2010 public workshop for the LCFS related to biofuel production and fuel pathway development.

As you know, (and as shown below), EDF has been an active advocate for the development of a framework that facilitates the collection and use of on-the-ground (field level) data to account for emissions associated with biofuel feedstock production and utilization. Our recommendations have been delivered in both the LCFS and the cap-and-trade regulatory development processes. There are several reasons why we pursue this endpoint, with probably the most substantial reason being the desire to create a durable system that facilitates environmentally beneficial feedstock production (thereby leading to accurate GHG accounting, overall GHG emissions reductions and environmental co-benefits). In this thread, EDF views 1) the release of the Biorefinery registration / reporting tool, 2) the LCFS compliance reporting tool, (LRT) and 3) the Guidelines for establishing new pathways under Method 2A/2B ("2A/2B Guidelines") as valuable opportunities to advance this goal.

EDF therefore respectfully requests CARB staff consider the comments below as it finalizes these three tools / documents in the upcoming weeks and months. By allowing for the reporting of local conditions (occurring at the feedstock, or field, production level), CARB can move toward a more comprehensive emissions reporting program, one which can have usable benefits outside the LCFS as California seeks to implement a multi-sector cap-and-trade program that incorporates emissions from biofuels.

I. **Brief overview of EDF's past comments on reporting of field level conditions and the importance of providing opportunities to demonstrate reduced emissions during feedstock production**

- a. Letter dated January 17, 2008 (Related to the then proposed LCFS concept)

"A default and opt in system for the carbon intensity of fuels- The [then] proposed LCFS takes into account emissions from biofuel feedstocks production by using pessimistic default values and encouraging farmers and producers to provide their own field level data. In addition, the proposed standard leaves it to CARB to establish specific values using regional per-

crop averages. We support this approach as a conservative method to avoid widespread utilization of environmentally unfriendly fuels. Further, we believe that a default system allows CARB to go forward with the standard while allowing for better data and quantification methods to be developed over time.”

b. Letter dated November 14, 2008 (Related to the then proposed LCFS outline)

“Regardless of the emissions, direct or indirect, CARB should strive to develop and utilize the most accurate emissions accounting possible within the Low Carbon Fuel Standard. Further ... CARB should use the LCFS as a tool to develop a broader understanding of how various fuel feedstocks and finished products are manufactured and distributed throughout the region, and how fuel providers can be held accountable for tracking the fuel. However, the desire to incentivize data reporting must be tempered by a need to prevent fuel providers from being able to pick the most economically advantageous time to report valuable fuel production information. Rather, the LCFS should strive to have fuel providers capture and report fuel production data as promptly as possible.”

c. Letter dated March 5, 2009 (Related to biofuel emissions reporting in the mandatory reporting regulation)

“Principle: Accurate, verified data is essential - California should strive towards the most accurate data possible, and away from using broad assumptions and emission factors. Although programs like the LCFS may use emissions factors and look-up tables, they also strive to improve emissions data with accurate, localized, field level reporting. ...CARB should strive to develop an accurate and robust data set for biomass emissions, including lifecycle emissions associated with the production and transportation of the biomass energy production. Although emissions factors and emissions modeling may be necessary for some aspects of the biomass pathway, CARB should strive to develop data that uses actual measurement and field level data. Although some of this data may not be incorporated into cap-and-trade programs, development of lifecycle emissions information for bioenergy production will allow fuel producers to seek emissions reduction opportunities.

d. Letter dated January 11, 2010 (Related to Cap-and-trade PDR)

“Biomass and biofuel combustion emissions should not be treated as zero carbon simply because the feedstock is of biological origin. Rather, sound science requires an accounting of the direct combustion emissions and the net carbon flux (atmospheric and terrestrial) associated with feedstock production depending on the site specific conditions and practices. Such a framework is capable of differentiating among feedstock production activities, rewarding reductions in net emissions to the atmosphere proportionally to what happens on the ground....

To acquire the needed data, EDF recommends CARB utilize data from on the ground measurements to accurately develop carbon flux values for bioenergy emissions accounting....

EDF encourages CARB to develop an estimation method based on aggregated empirical data for each biomass feedstock based on the particular types of production system to account for carbon values from various biomass production activities for each crop and forestry feedstock. This method must account for differences in the same feedstock produced under different conditions, and should include estimations of leakage or indirect land use change. One alternative could be to develop look-up tables similar to those developed in the LCFS and would allow CARB to deduct the net emissions reductions from the quantity of emissions released due to product combustion. Biofuel or biomass producers could be given the option of providing real data if they believe they are performing better than the values selected in the look-up tables. Crediting could be at the level of the energy producer, contingent on a certification system or other means of demonstrating the production systems on the sites from which feedstocks are sourced...”

II. Importance of the opportunities before CARB and connection to the AB 32 cap-and-trade program

At this point in the development of the tools and guidelines that implement the LCFS, EDF recognizes that CARB has the necessary focus of reducing the overall regulatory complexity, ensuring regulated parties understand and are able to comply the provisions that impact them, and creating opportunities to allow the development of new fuel pathways to document and facilitate reduced GHG emissions. At the same time however, CARB staff in the Office of Climate Change are developing the construct for a cap-and-trade program that may incorporate emissions from biofuel combustion. As recommended in our comment letter on the cap-and-trade PDR, (and as generally discussed in Options 2 and 3 of the PDR) one method for including biofuels emissions would be to account for direct combustion while allowing producers to document field level practices that facilitate overall fuel emissions reductions. (See excerpt from Jan. 11, 2010 letter above). Therefore, EDF strongly recommends CARB develop the Biorefinery registration tool, LRT and 2A/2B Guidelines with full regard towards creating the opportunity for biofuel feedstock suppliers to document and report the local conditions within which their feedstock was produced.

a. Biorefinery registration / reporting tool

It is our understanding that the purpose of the Biorefinery registration tool is to provide an up-front assessment (and verification) of the carbon intensity assigned to certain fuels being produced at individual facilities. By qualifying individual facilities, CARB will create a useable database from which to pull values into look-up tables for documenting and assigning fuel carbon intensity. However, as designed and released on February 2, 2010, this tool underperforms because it lacks the ability to allow biorefineries to document and report any field level characteristics other than feedstock type (i.e. corn, sugarcane, Midwest soybeans, tallow, used cooking oil, etc.)

If the biorefinery registration tool had the capability of allowing facilities to report items related to feedstock production at the field level, it would become immediately helpful in the effort to develop a framework that allows farmers to document their production practices and report them

to feedstock processing plants. Such a capability would allow for the development of a more robust LRT and also generate more information related to upstream emissions in general. Examples of the type of information that could be reported at the biorefinery level include those identified in the Method 2A/2b guidelines document - whether the feedstock was in whole or part composed of waste materials, whether feedstock was biomass grown on degraded land or between row crops, whether biomass resulted from increased crop yields or perennial grasses, what tilling and soil cultivation practices were used, what the prior land use was, etc.

By allowing for reporting of local conditions (and more specific delineation of feedstock type), the biorefinery registration tool would be a helpful start for creating a tracking and reporting framework able to reward production methods and processes that reduce GHG emissions at the field level. This will also be important to support Method 2A/2B fuel pathway development. Further, by allowing for reporting of field conditions, the tool could accommodate technological breakthroughs occurring at biorefineries that are beginning to allow (at the production scale level) the development of biofuels using blends of purpose grown energy crops and gathered waste materials. Finally, allowing field level conditions to be reported at the biorefinery level would allow CARB to develop information necessary to accurately account for carbon flux values associated with biofuel use in the state cap-and-trade program for transportation fuels.

Of course, a potential concern of farmers and landowners to an approach that facilitates field level data collection is whether the information will be retained in a confidential by the regulatory agency. EDF recognizes this as a valid concern and recommends CARB work with landowners to ensure issues and concerns regarding data confidentiality do not undermine the effort to achieve the reporting structure necessary to facilitate and reward reductions of GHG at the field level.

b. LCFS compliance reporting tool (LRT)

Under the currently proposed LCFS, fuel providers are responsible for reporting various characteristics of the fuel they sell, including blendstock type, blendstock feedstock, amount of each blendstock sold (MJ), feedstock origin and production process. These characteristics are linked to look-up tables that were developed using GREET modeling runs and determine fuel provider compliance obligations under the standard. What is missing from this set of required reporting parameters is field or farm level characteristics.

Although the set of parameters required to be reported by fuel providers is set forth in the regulation, there is no reason why CARB could not allow for voluntary reporting of field level conditions at the outset of the LRT use (as listed above and as potentially to be recommended by the LCFS expert workgroup on land use emissions). By allowing fuel producers to report local information that is documented coincident with feedstock production and reported along with the other information submitted to biorefineries, the CARB LRT can begin to create a platform that facilitates the valuation of land use practices that show which biofuels have negative or neutral carbon flux values. This is the approach that is generally envisioned in the Guidelines for Method 2A/2B, and an LRT that supports it would be highly valuable. Additionally, when

combined with an expanded biorefinery registration program that takes in this information, the LCFS can help document which fuels coming into California are made from feedstocks produced in an environmentally preferable manner as determined by carbon intensity values.

Although the Method 2A/2B process for documenting improvements in the fuel production pathway attempts to achieve reporting of conditions that can lead to reduced lifecycle GHG emissions, to date there hasn't been a robust discussion of how the LRT will allow for information collection at a much smaller scale with more rigorous carbon accounting. To assist the development of new pathways for Method 2A/2B, EDF recommends CARB ensure the LRT is able to accept this information and provides guidance for submitting product transfer documents and feedstock delivery pathway documentation.

c. Guidelines for establishing new pathways under Method 2A/2B

In general EDF is very supportive of CARB's effort to allow fuel producers to document and report additional pathways for LCFS compliance. As accurate field level information is developed that can help identify carbon flux values associated with biofuel feedstock development, that state will get closer to being able to reward fuel producers who implement the least GHG emissive cultivation practices.

In addition to adopting guidelines for fuel providers to submit new fuel pathways, EDF also encourages CARB to request from the recently formed expert workgroup - information (in the form of links to peer reviewed and ongoing research) related to emissions associated with various field level production characteristics. By creating look-up table values for emissions associated with various field level practices for use by applicants attempting to certify Method 2A sub-pathways, (and embedding those values into the Guidance document) CARB can streamline the pathway development process as well as facilitate reduced GHG emissions. Further, since field level values are an essential aspect of determining carbon flux values, such a system would be helpful for determining biofuel emissions obligations under the proposed cap-and-trade program.

Thank you for your time and consideration of these points.



Tim O'Connor
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February 5, 2010
Mary D. Nichols, Chair
California Air Resources Board
Headquarters Building
1001 I Street, P.O. Box 2815
Sacramento, CA 95812

Re: Request for comments on Establishing New Fuel Pathways under the California Low Carbon Fuel Standard

Dear Ms. Nichols:

We welcome the opportunity to provide input and comment on the additional information posted on the Draft Concept Paper entitled "Establishing New Fuel Pathways" under the California Low Carbon Fuels Standard Procedures and Guidelines for Regulated Parties dated January 20, 2010 ("Draft Policy"). As a preliminary matter, we are uncertain regarding the intent of this document, since to our knowledge it has not been formally noticed for adoption by the California Air Resources Board (CARB), and is not clearly identified as a document that is intended as regulatory guidance.¹ Indeed, we have been told by CARB staff members that a "deadline" for providing comments was to end on the date of this letter despite no formal notice.

This regulatory confusion is problematic, and a more rigorous and regular approach to establishing critical State policy should be followed. Indeed, despite this lack of formal process, it appears that this document may be viewed by CARB staff as a *de facto* regulation in that it is required to fully implement the recently adopted California Low Carbon Fuel Standard. See 17 Cal Code Regs., §§ 95480, 95480.1, 95481, 95482, 95483, 95484, 95485, 95486, 95487, 95488, and 95489. If so, this would be an improper

¹ Compliance with the rulemaking requirements of the California Administrative Procedure Act (APA) is mandatory. *Armistead v. State Personnel Board* (1978) 22 Cal.3d 198. The APA requires public notice and an opportunity for public comment. See Cal. Gov. Code, § 11346.2 et seq. All regulations are subject to the APA, unless expressly exempted by statute. *Engelmann v. State Board of Education* (1991) 2 Cal.App.4th 47. Courts have frequently indicated that any doubt as to the applicability of the APA should be resolved in favor of the APA. *Grier v. Kizer* (1990) 219 Cal.App.3d 422, 428. If a rule looks like a regulation, reads like a regulation, and acts like a regulation, it will be treated by the courts as a regulation whether or not the issuing agency so labeled it. *State Water Resources Control Board v. OAL* (1993) 12 Cal. App. 4th 697.) A "regulation" includes "every rule, regulation, order, or standard of general application or the amendment, supplement, or revision of any rule, regulation, order or standard adopted by any state agency to implement, interpret, or make specific the law enforced or administered by it, or to govern its procedure." Cal. Gov. Code, § 11342.600 "An underground regulation" is a regulation that a court may determine to be invalid because it was not adopted in substantial compliance with the Administrative Procedure Act (Gov. Code, § 11340 et seq.). *Modesto City Schools v. Education Audits Appeal Panel* (2004) 123 Cal.App.4th 1365, 1381.

underground regulation because this document was released without providing formal public notice or complying with the requirements of the APA. Accordingly, these Standard Procedures and Guidelines cannot be adopted by the CARB without first complying with the rulemaking process established for regulation by the California APA.

Nevertheless, Monsanto Company ("Monsanto") and other members of the public do desire to be engaged in the development of policies regarding new fuel pathways under the California Low Fuels Standard because of the potentially significant impacts upon America's farmers. Within the context of a more rigorous comment period, Monsanto wishes to provide additional comments, but at this time will only provide a limited introduction and an overview of concerns regarding the Draft Policy. Monsanto is the world's leading agricultural company focused on seeds and agricultural biotechnology traits. We focus on the farm, and we discover and deliver innovative products to help farmers sustainably feed, fuel and clothe our growing world. Over the past 10 years, we have developed the world's largest library of genetics for our core focus crops: corn, oilseeds, cotton and vegetables. Our global germplasm library is utilized by more than 250 breeders at hundreds of locations around the world, and it allows our business to combine genes from distant locations to create powerful new seed products. Through our world-class research and development capabilities, we are constantly evaluating and testing these genes in various environments. We are also using tools, like molecular markers, to more efficiently and effectively mine our genetic library. Our molecular marker capabilities allow us to "tag" each gene and "remember" its location so that we can quickly find and combine the right genes to increase yield and fight crop stress. This approach allows us to accelerate our yield improvements and supports expanded opportunities for growth across our business.

While our advances in breeding allow us to enhance yield, our trait technology preserves that yield by protecting it from outside pests and stress. Uncovering and enhancing key traits for each of our crops—and stacking them in our higher-yielding seeds—has helped us to deliver compelling products to the marketplace that have revolutionized agriculture. Further, Monsanto has committed publicly to delivering on critical agricultural advancements that should impact the policies of the CARB in regard to California's Low Carbon Fuels Standards.

As a component of Monsanto's Sustainable Yield Initiative, Monsanto has publicly committed to develop improved seeds that help farmers double yields by 2030 from 2000 levels for corn, soybeans and cotton, all while using one-third fewer key resources per unit of output to grow crops, and while working to lessen habitat loss and improve water quality. These dramatic improvements in yield should be recognized through appropriate pathways in California's Low Carbon Fuels Standard. Unfortunately, our review suggests this Draft Policy has not appropriately developed standards that will allow these as well as other dramatic changes in American agriculture to be recognized as a separate and distinct sub-pathway considered by the CARB.

Notably,

- 1. The proposed procedure does not provide a direct and clear mechanism for agricultural and crop technology innovations which have the potential to decrease direct emissions of biofuels to be recognized.**

One of the key benefits of renewable fuels is that the raw material utilized is regenerated on a frequent basis. For example, the corn utilized to make ethanol is harvested once per year. The current ruling suggests that for development of a Method 2A pathway, the direct impacts must be "verifiable, durable,

and capable of being easily monitored. " Although the word durable is not defined, it is important for the regulations to clearly state that modifications to direct agricultural inputs and practices that meet all of the other criteria would be eligible for a new fuel sub-pathway. Using corn ethanol as an example, this clarification will both encourage and reward ethanol plants and farmers to improve and reduce non-point source emissions associated with agriculture.

- 2. The proposed procedure does not provide a direct and clear mechanism to recognize agricultural and crop technology innovations that have the potential to reduce indirect land use change emissions.**

California's LCFS regulations clearly acknowledge that improved crop yields decrease the amount of land required to produce crops to offset biofuel production. It is therefore important that a procedure that enables a pathway for technologies that could increase crop yields and subsequently decrease indirect land use change impacts be established – even though the decisions driving the agricultural production systems will be by their very nature inherently reversible.

The proposed regulation states that "in order for sub-pathways which include reduced land use change impacts to be approved by the Board, however, the impact reductions must be reasonably permanent and readily verifiable. Process modifications that can be easily reversed will not be approved. Examples of processes the Board would not consider to be permanent and verifiable include small scale and easily reversed changes to agricultural practices such as the adoption of no-till methods..." The text goes on to say, however, that "When changes such as these are adopted (sic) a wide scale, however, the Board will consider approving pathways that include them."

Wording the proposed procedure in such a manner is arbitrary and capricious because it appears to assume a worst case scenario for technology adoption, and makes no effort to accurately reflect the true adoption of biotechnology and improved agronomic practices. The proposed procedure fails to define "wide scale" and fails to recognize, for example, the fact that 1) reduced tillage operations are being practiced on large areas of land 2) that farmers have to expend capital to purchase specialized equipment such as planting drills to enable no-till operation and 3) that farmers have a history of rapidly adopting new technology that increase agricultural productivity or improve soil health – and that farmers do not revert back to farming practices that are outmoded. Furthermore, it should be acknowledged that the amount and scope of data maintained by the USDA on farming production practices is broad, extensive and regional in nature and can serve to help verify production processes.

It is highly prejudicial that farmers who practice improved production techniques that decrease the environmental footprint of their farming operations can not be recognized for their innovations and capital expenditures to improve the environment because said farmer's environmental footprint is not measured by their actions and production practices, but rather by the actions of the industry as a whole.

- 3. It is important that the regulations be written such that agricultural producers who do adopt practices to reduce the carbon footprint of their production operations are not penalized for the practices of inefficient competitors and are not denied access to critical markets for their products due to the actions of others.**

One clear method to ensure that agricultural innovation is encouraged is to enable development of specific pathways and sub-pathways that recognize agricultural practices that decrease non point source emissions provided the agricultural system practices meet the verification and monitoring requirements

specified. These pathways should be enabled even if they are based upon crop production decisions that can be made on an annual basis as long as the fuel processing facility can demonstrate their feedstock sources meet the pathway or sub-pathway requirements.

- 4. Guidelines should recognize that the development of new pathways within an agricultural system can have the potential to impact both direct and indirect effects of existing pathways.**

LCFS regulations inconsistently allocate direct impacts across most, but not all of the products produced from a single crop. A common methodology should be used for current as well as future agricultural co-products. In the case of crop residues, it should be recognized that current as well as future markets will not be limited to liquid fuel production. For this reason and because crop residues are not produced in isolation of a crop, residues which are removed from the field should be treated as a co-product when allocating emissions.

- 5. It is important that guidelines are provided so that agricultural system boundaries are sufficiently large so as to incorporate potential changes in future crop yield, both positive and negative, resulting from agricultural practices.**

There are many potential modifications to agricultural practices that can impact, in both positive and negative ways, future crop yields for a given unit of land. Examples of such agricultural practices include, but are not limited to, residue removal, intercropping, double cropping, mixed cropping, crop rotation and crop tillage systems. Agricultural system boundaries should be extended over a long enough period of time so that the sustainability of the cropping system can be monitored, measured and maintained.

We welcome the opportunity to meet with members of CARB to provide the data and information necessary to accurately develop sub-pathways to ensure California is correctly accounting for the demonstrated greenhouse gas reductions so evident and evolving in agricultural production practices. Thank you for the opportunity to comment on the preliminary draft of procedures for establishing new fuel pathways under the California Low Carbon Fuel Standard.



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From: Singh, Manisha@ARB
Sent: Thursday, February 04, 2010 8:48 AM
To: Ingram, Wes@ARB; Waugh, Mike@ARB
Cc: Curtis, John@ARB
Subject: RE: New Fuel Pathways and Sustainability Work Plan Draft Comments
 Mike and Wes,

FYI, comments on topics that you covered during the January workshop.

Best,
 Manisha

From: Ogorzalek, Kevin [mailto:Kevin.Ogorzalek@WWFUS.ORG]
Sent: Wednesday, February 03, 2010 3:27 PM
To: Singh, Manisha@ARB
Subject: New Fuel Pathways and Sustainability Work Plan Draft Comments

Dear Ms. Singh,

I am writing to submit comments for two of CARB's current documents (comments for each document immediately following the document name):

- 1) Draft "Establishing New Fuel Pathways Under the California Low Carbon Fuels Standard"
 - CARB should ensure that within the reporting on the fuel pathway that fuel cannot be double counted so that companies get credit for sending ethanol to the US and Europe.
- 2) Draft "Low Carbon Fuel Standard Sustainability Workplan"
 - CARB should strongly consider not creating its own standard rather, it should create a benchmark test against which current developing and existing standards can be compared. If the standards pass this benchmark test, then CARB should recognize that voluntary standard as satisfactory to meeting its own sustainability requirements. Should a standard initially pass the test, and eventually prove inadequate, CARB should no longer recognize it as adequate.
 - The Working group should be a mix of NGO's, producers, processors, and other relevant experts to ensure a balanced voice. They should meet at least once a month and have members well versed in: GHG emissions, land use, freshwater and marine habitat impacts, toxic nature of pesticides, social/labor issues in agriculture and processing, economics, trade and other voluntary standards. Group should generally focus on examining existing standards and identifying which ones are suitable for CARB's desired outcomes and what gaps exist. Any identified gaps should be brought to the attention of the standard setting body so that they can rectify the situation in order to qualify for CARB's recognition.
 - CARB should aim for as much of a metric-based system as possible and avoid prescribing practices, as much as possible.
 - CARB should collaborate with both US federal agencies (e.g. USDA and EPA) as well as the EU bodies responsible for the Renewable Energy Directive in order to streamline rules and avoid undue regulatory burden on producers while ensuring that sustainability metrics demanded by all regulators do not conflict, to the greatest degree possible. This collaboration will allow for more consistent sustainability metrics, greater chance of achieving overall goals, and greater ability for producers to understand how to get to where they need to be and continuously improve.

- CARB's recognized standards should seek continuous improvement.
- The current environmental impacts within the draft focus heavily on ILUC.
- The social sustainability work should focus heavily on ensuring that the relevant International Labor Organization conventions are adhered to across the value chain. There should also be a requirement to demonstrate appropriate land tenure.
- A key certification system that is missing from the certifying list is the International Sustainability and Carbon Certification (http://www.iscc-project.org/index_eng.html).
- The sustainability standards should find a manner to be globally significant and locally appropriate for producers to achieve sustainability.

Thanks for your time and I am happy to follow up and provide further explanation.

Best,
Kevin Ogorzalek

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February 5, 2010

Mary Nichols, Chair
California Air Resources Board
Headquarters Building
1001 I Street
Sacramento, CA 95812

RE: New Fuels Alliance Comments Regarding California LCFS New Fuel Pathways and High Carbon Intensity Crude Oil

Dear Chairwoman Nichols,

The New Fuels Alliance (NFA) appreciates the opportunity to provide written comments to the California Air Resources Board (ARB) relative to the Low Carbon Fuel Standard (LCFS) as contained in the January 20, 2009 Concept Paper titled "*Draft/Establishing New Fuel pathways Under the California Low Carbon Fuels Standard/Procedures and Guidelines for Regulated Parties*" (Concept Paper).

NFA is a national, not-for-profit organization that educates political leaders, regulators, public interest groups, businesses, and the general public about the economic, environmental and other benefits of non-petroleum fuel production and use. Its organizational purpose is to bring together the wide range of groups and sectors that are stakeholders in the development of non-petroleum fuels to build a broad and diverse base of support for a more sustainable fuel-energy future in the United States.

As you may know, NFA has been an active participant in the LCFS process, and supported the concept when the Governor first unveiled it in 2007. However, NFA strongly disagrees with ARB's approach to certain program design elements of the LCFS, particularly as they relate to system boundaries, asymmetrical carbon accounting, modeling and the treatment of petroleum. While it is not the intent of the comments below to rehash our position on these key issues, it is inevitable that certain arguments NFA has put forth in previous comments will again apply here. NFA appreciates ARB's continued work on the LCFS and encourages ARB to process the comments below through the lens of creating a durable regulation that treats all fuels equally.

1. Additional Information Required for Stakeholders to Assess Methods 2A/2B

The Concept Paper issued by ARB lacks substantive discussion, transparency and background on several matters. Without proper information put forth by ARB, it is extremely difficult to understand how and/or why ARB made certain determinations. This poses significant challenges to fuel producers, investors and other stakeholders because there is no guidance as to the rationale for the proposed regulation, which limits opportunities to move forward with potential changes to fuel pathways. NFA respectfully requests ARB to provide the following information promptly and with supporting documentation, when necessary:

- 1) The Concept Paper (pg. 8) discusses, as part of the evaluation criteria of a new sub-group pathway, the issue of substantiality. Specifically, ARB states that “a new sub-pathway will only be approved if the applicant can demonstrate that the volume of fuel that will be produced using the proposed sub-pathway will rise to at least ten million gasoline-gallon-equivalents per year within about five years from the onset of production.” ARB defines the ambiguity of “about five years” with further uncertainty by acknowledging that in some circumstances “a somewhat longer time horizon may be acceptable.” How and why did ARB determine the ten million gasoline-gallon-equivalents per year volumetric requirement for this section? Also, why did ARB propose a five year threshold for this section, and under what circumstances would that time frame be flexible?
- 2) The Concept Paper (pg. 9) states that “applicants must demonstrate that the proposed new sub-pathway will yield a carbon intensity improvement of at least five gCO₂e/MJ over the existing sub-pathway to which the proposed sub-pathway most closely relate(s).” While it makes sense that ARB would not want to review each and every proposal that demonstrated limited carbon reductions from a new fuel pathway, NFA seeks clarity on how ARB determined the five gCO₂e/MJ number. Also, why does ARB believe that a new sub-pathway with improved carbon intensity (predicted with a high level of certainty), for example 4.99 gCO₂e/MJ, should not get credit for that benefit and instead be relegated to a higher CI score previously determined in the Lookup Table? As a point of contrast, ARB is proposing that petroleum can increase its carbon intensity by roughly 7 gCO₂e/MJ (up to a threshold of 15 gCO₂e/MJ for production and transport) and nonetheless receive the Lookup Table value that does not reflect this increase. NFA requests ARB to explain the inconsistencies here, and provide scientific support for these allowances. It does not seem prudent to turn a blind eye to 4.99 gCO₂e/MJ carbon intensity improvements, or 7 gCO₂e/MJ petroleum backsliding.
- 3) The Concept Paper (pg. 9) discusses the requirement for new pathways to be scientifically defensible and indeed sets the minimum standard for scientific defensibility to be the same type of data and analysis that led to the existing values established in the Lookup Tables. ARB states that the “strength of the scientific and technical data behind those lookup table values” is the baseline and that new pathways must at least meet the “robustness” of the analysis that led to the creation of the Lookup Table numbers. However, it is not clear what this means. On the one hand, ARB has assessed indirect land use change (iLUC) adders to biofuels based on peer-reviewed modeling. On the other hand, they have assigned a zero value for the indirect effects of other fuels without doing any economic modeling of these fuels and despite peer-reviewed and otherwise credible analysis submitted to ARB suggesting that other fuels indeed have indirect effects. NFA has on numerous occasions specifically requested ARB to document how it made the determination that petroleum and other fuels do not have indirect effects. NFA requests the following: 1) any scientific, technical, and modeling data on how it made its determination that petroleum and other non-biomass derived fuels do not have significant indirect impacts; 2) all research on the land use and/or indirect effects of other fuels conducted or submitted to ARB; 3) how ARB can state that the Lookup Tables represent a robust analysis of scientific and technical data when key indirect effect investigations have not been conducted, according to the

public record; and, 4) what, for practical purposes, the standard really is when it comes to robustness.

- 4) In numerous examples throughout the Concept Paper, ARB states that the appropriate carbon intensity determination tools are “CA-GREET and GTAP (or an equivalent tool).” NFA and many other stakeholders have expressed serious concerns with GTAP. While the Concept Paper notes the use of “an equivalent tool”, presumably one that is comparable to GTAP, ARB offers no insight into what would comprise an acceptable alternative model for this assessment. Has ARB identified an alternative model, and if so, what is it and how might it be accessed by stakeholders? If ARB has not determined what “an equivalent tool” is, NFA requests ARB to provide guidance as to what constitutes an acceptable alternative.
- 5) The Concept Paper also notes that applications for new fuel pathways must discuss the potential for “significant land use change impacts or other indirect impacts.” As discussed, ARB has failed to disclose or document any examples in which it investigated any indirect effects outside of land use change for any pathways other than biofuels. Therefore, NFA seeks clarification as to what other indirect impacts an applicant would be required to disclose as part of a satisfactory Method 2A/2B submission.
- 6) ARB states in the Concept Paper (pg. 12, 20) that any proposed new or sub-pathway that entails indirect carbon effects will require a public hearing to be conducted before ARB, as opposed to the Executive Officer (which conducts hearings for pathways not deemed to create indirect effects). Why is ARB requiring that it conduct all public hearings in matters involving indirect effects? As the analysis of indirect carbon emissions matures, as it inevitably will, and indirect effects are identified for all fuels under the LCFS, is ARB prepared to require public meetings for all alternative pathways?

2. ARB’s Proposed Treatment of High Carbon Intensity Crude Oil is Arbitrary and Will Allow the Use of Significant Volumes of HCICO Without Penalty

It is unclear how high carbon intensity crude oil (HCICO) will be identified in the marketplace and evaluated as part of the LCFS program. ARB has proposed, without public workshop or substantial supporting documentation, a compliance regime for petroleum that could result in significant quantities of HCICO qualifying as average petroleum. NFA has contacted ARB with specific questions about the treatment of petroleum in the LCFS and has been told that an “Advisory White Paper” will be released that will further delineate HCICO issues. NFA welcomes this additional information to be included in the public record. In the meantime, NFA seeks ARB responses to the questions and concerns outlined below:

- 1) It appears from the Concept Paper (pg. 28) that finished fuel from eight countries/regions (California, Alaska, Saudi Arabia, Ecuador, Iraq, Brazil, Mexico, and Angola) will automatically receive carbon intensity values pre-determined in the Lookup Table, irrespective of how the fuel was produced, because crude from these regions comprised at least two percent of the total California oil mix in 2006. It is important to note that the country or region of origin does not necessarily dictate the carbon profile of a gallon of crude. Indeed, some countries like Saudi Arabia and Iraq are transitioning away from light, sweet crude to heavier, sour crude. NFA requests clarification as to why ARB made the determination that country or region of origin is a more effective way to

base carbon values, as opposed to (for example) developing a set of fuel characteristics that refiners must not deviate from to qualify for the average petroleum CI value.

Furthermore, the Concept Paper (pg. 28) does not provide guidance for how ARB would make the determination that a gallon of fuel qualifies as a being included in the 2006 California baseline crude oil mix. In other words, it is unclear how much crude, on a percentage basis, from a country or region that is included in the 2006 California oil mix average would be required to comprise a gallon of fuel that qualifies for the average Lookup Table value, or how this would be enforced. NFA requests ARB to outline what specific percentage or threshold would determine that a gallon of fuel was “derived” from a particular country or region. Also, does ARB intend to require petroleum companies to disclose country of origin of crude for enforcement or verification purposes? If this chain of custody is not disclosed, how will ARB enforce the provision?

- 2) ARB has proposed a three step screening process for crude that is not part of the 2006 California baseline crude oil mix. The Concept Paper (pg. 28) notes that ARB will develop a “conservative” list of criteria, but fails to define what exactly that means and how it will be applied. Further, in the example list of criteria outlined (pg. 29), ARB does not provide any insight as to how the fuel criteria were developed. How and why did ARB develop the numbers and thresholds for the five example criteria? Also, if the examples from the Concept Paper are not intended for adoption, how will ARB determine the specific criteria that would classify a gallon of crude as either low or high carbon intensity, and will that be conducted as part of a public process? In addition, ARB states that crude oils not meeting all of the established criteria “will undergo a more rigorous screening” to determine its carbon intensity classification. NFA requests ARB to explain specifically what a “more rigorous screening” process would include and if the process would be conducted in a public forum.
- 3) ARB has stated in the Concept Paper and the Final Statement of Reasons (FSOR) that petroleum that exceeds 15 gCO₂e/MJ for its production and transportation would have to assess and use its actual (higher) CI value. This is the primary trigger for HCICO. The current score for petroleum’s production and transport is 8.07 gCO₂e/MJ. As such, petroleum is afforded a buffer or leniency of 6.93 gCO₂e/MJ prior to the application of HCICO rules. NFA seeks clarity into ARB’s rationale for providing this significant leniency provision for petroleum. Specifically, why did ARB include this provision in the program and how did regulators determine the related numbers? If 8.07 is an average, and 15 g/MJ is determined to be the first reasonable point outside of that average, please provide the data supporting this conclusion. It also appears that this threshold is not going to be enforced rigidly. The FSOR (pg. 24) notes that crude oil produced using thermally enhanced oil recovery (TEOR) techniques has an average production and transport carbon score of 18.89 gCO₂e/MJ. While this is clearly above the 15 gCO₂e/MJ threshold, ARB states that it will nonetheless receive the Lookup Table CARBOB average score of 95.06 gCO₂e/MJ because ARB *assumes* that AB 32 will require TEOR refineries to adopt mitigation measures reducing their production and transport emissions below 15 gCO₂e/MJ. This is an arbitrarily, policy-induced assumption that could be applied to any fuel based on policies that incent carbon emissions reductions, and renders the 15 gCO₂e/MJ threshold virtual in nature. There is also no scientific support presented for this assumption. Why did ARB make this policy assumption and what data were used to

support this assumption? According to a report NFA submitted to CARB (see below), TEOR petroleum has an actual carbon score of 109 gCO₂e/MJ. This means that based on the current proposal, a 109 gCO₂e/MJ petroleum fuel would receive a 95.06 gCO₂e/MJ CARBOB average score. This is the equivalent of a 15 percent leniency provision for TEOR. What is ARB's rationale for providing this type of leniency?

- 4) In early 2009, NFA provided ARB with a report outlining several petroleum fuel pathways.¹ The report, which was funded by NFA and conducted by some of the same researchers at Life Cycle Associates that worked with ARB on the LCFS program, has been repeatedly mischaracterized by ARB staff as showing no significant indirect effects for oil (in fact, the report does not provide economic analysis of oil but states that it can and should be done). Either way, the report demonstrates that individual pathways can be assessed for oil, in the same way they are assessed and identified for biofuels. Did ARB conduct its own analysis of petroleum, including but not limited to individual pathways such as oil sands, tar sands and heavy crude, and if so, is it available for public review? If ARB has not conducted such an analysis of petroleum, does it intend to do so?

3. Supply-Chain Accountability Must Be An LCFS Requirement For Oil, especially HCICO, to Avoid LCFS Ineffectiveness and Gaming

To achieve meaningful, verifiable and durable carbon reductions in the LCFS program, ARB must gain a full understanding and appreciation of the direct and indirect effects associated with the production and use of petroleum. A clear picture of petroleum's carbon impacts must emerge quickly because as the baseline fuel, it is the standard to which all compliance fuels are measured against. As discussed, ARB's treatment of petroleum is ambiguous, lacks transparency and does not compare equitably to the regulations and requirements imposed on biofuels. To that end, NFA makes the following recommendations, and requests ARB to respond to the viability of each, and to provide rationale as to why, or why not, they will be adopted for program implementation:

- 1) **In the event that ARB maintains its "country of origin" approach to HCICO and petroleum assessment, NFA recommends that ARB require petroleum companies to fully disclose extraction, production and distribution methods, as well as country of origin for LCFS eligibility.** While the country of origin of petroleum can provide some important insights as to the profile of certain crude oils, the carbon impacts of HCICO, and indeed all petroleum fuels, it cannot be solely determined by this process. Rather, a variety of factors influence the ultimate direct GHG emissions, such as type of oil, extraction methods, flaring techniques and distribution sources. If ARB wants to allow oil companies to use fuels with certain country of origin without limitation under the LCFS, there should substantive and transparent protocols to ensure that this oil does not get more carbon intensive over time.
- 2) **ARB should eliminate geography, or country of origin, from its assessment of petroleum's carbon intensity and rather develop a standard that accurately reflects the carbon profile of 2006 California crude oil mix, as an alternative to Recommendation #1.** ARB appears to have taken the first step toward delineating this standard by identifying fuel specifications (p. 29) that generally reflect today's

¹ http://www.newfuelsalliance.org/NFA_PImpacts_v35.pdf

petroleum characteristics. ARB should take this process a step further. It should initiate a stakeholder process to identify the half dozen or so fuel characteristics that will establish a reasonable system boundary around today's fuels. Oil refiners must stay within these boundaries, or face an alternative pathway requirement (including HCICO). This would allow regulators to ensure that oil companies do not use more carbon intensive petroleum free of charge under the LCFS.

- 3) **NFA recommends that the screening process for petroleum, as outlined in the Concept Paper (pg. 29), include a public hearing and ARB review/approval process if any indirect effect is identified.** ARB has proposed that any new fuel pathway that is determined to have indirect land use change implications automatically triggers a public hearing and ARB review and approval process. If ARB is to maintain this requirement for one type of indirect effect (land use change), it is imperative that a consistent standard is applied to all fuels applying for alternative pathway treatment. As such, any fuel seeking an alternative CI value that is shown to have indirect effects of any kind should be required to comply with the same process as iLUC. This is the only consistent way to deal with indirect, market-mediated effects, and should be made explicit by ARB, even if other indirect effects are identified down the road or by the expert working group.

Thank you for the opportunity to provide comments on these matters as they relate to the LCFS program. Please let us know if we can answer any questions you may have.

Sincerely,



Andrew Schuyler
Regional Director
New Fuels Alliance

February 5, 2010

John Courtis
Manager, Alternative Fuels
California Air Resources Board
Headquarters Building
1001 I Street
Sacramento, CA 95812

Mr. Courtis,

As the nation's largest trade association representing U.S. ethanol producers, the Renewable Fuels Association (RFA) appreciates the opportunity to provide comments on the draft concept paper titled "Establishing New Fuel Pathways under the California Low Carbon Fuels Standard: Procedures and Guidelines for Regulated Parties" ("Concept Paper"), released by the Air Resources Board (ARB) on January 20. Our comments and questions on the specific elements of the Concept Paper are described below.

1. Timeline for Application and Approval

The start-to-finish timeline for Method 2 application and approval is unclear. In the Concept Paper, ARB clearly specifies that 15 days will be allowed for ARB to evaluate the completeness of an application, 45 days will be allowed for public comment, and up to 30 days will be required for approval by the Office of Administrative Law (OAL). However, the time allotted for several other phases of the process is not clear. For instance, how long will it take for the staff to complete its "preliminary findings" (presumably these findings will serve as the Initial Statement of Reasons (ISOR)) after the determination has been made that the application is "complete and otherwise qualifies for further processing..."? How long after the Board or Executive Officer hearing will the Final Statement of Reasons (FSOR) be completed and forwarded to OAL? In general, how long will the process take (from time the application is submitted to time the new pathway is added to look-up table)?

Based on the information currently available, it appears to us that it may take 4-6 months for completion of the Method 2 application and approval process. If this is correct, we are recommending that the Method 2 application process be finalized no later than April 1, 2010, so that producers could feasibly complete the process in time for implementation of the LCFS carbon intensity reduction schedule in 2011.

2. Online Application Tool

When will the secure Method 2 application tool be available online? Will there be a guidance document available to accompany the application tool? As discussed above, we are recommending that the tool be made available no later than April 1, 2010, so that producers may begin applying.

3. Informal Consultation with ARB Staff

The Concept Paper suggests applicants should contact ARB for informal consultation prior to submitting an application. Who is the point of contact at ARB for these consultations? We are recommending that ARB allow this consultation to be conducted via teleconference or webinar to reduce expenses for potential applicants. How soon can potential applicants begin scheduling these consultations? We are requesting that ARB allow these consultations to begin as soon as possible.

4. Treatment of Unique Agricultural Improvements

The Concept Paper does not specifically speak to agricultural factors related to the direct GHG lifecycle of biofuels. The paper states only that new sub-pathways are created when an applicant "...can demonstrate that a new or improved fuel production, transport, storage, and/or dispensing process significantly reduces the lifecycle carbon intensity of the existing pathway." Based on the accepted notion that feedstock cultivation is part of the "fuel production" process for biofuels, it is our understanding that a Method 2A application and site-specific CA-GREET analysis may include permanent improvements in agricultural production factors related to feedstock cultivation. Is this assumption correct? As an example, if a biofuel producer can demonstrate that he consistently sources feedstock with a higher yield per unit of land than was modeled for the default CI value, he should be able to claim credit for the associated GHG benefit.

To be clear, we are not asking about whether applicants have the ability to apply for a unique ILUC factor due to the processing of higher yielding feedstocks or other agriculture-related factors. Rather, we are seeking clarification as to whether crop yields and other agricultural factors can be modified in the CA-GREET for the purposes of securing a unique CI value based on adjusted *direct* GHG emissions. The U.S. Department of Agriculture collects timely data that could be used to validate applicant modifications to default CA-GREET agricultural values. For instance, historical county-level crop yield data from USDA could be used to verify the applicant's modifications to the default CA-GREET assumptions on corn yield. Similarly, if the applicant can clearly show that his feedstock was produced using amounts of fuel, fertilizer and chemical inputs that are below the CA-GREET defaults, and that these improvements result in at least a 5 g CO₂e/MJ (g/MJ) improvement, he should get credit for using feedstock that is "lower carbon" than the average assumed for the look-up table values.

5. Substantiality Requirement

For a Method 2A application, the Concept Paper states that the applicant must show that the new sub-pathway will result in a carbon intensity improvement of at least 5 g/MJ over the existing pathway "...to which the proposed sub-pathway most closely relates." It is likely that there will be instances where it is not clear which existing look-up table pathway relates most closely to the proposed sub-pathway, yet the applicant's process does not result in an entirely new pathway (such as those that would be approved under Method 2B). What is ARB's guidance for these situations? An example may be a coal-fired dry mill with wet distillers grains (WDGS), a pathway that was not considered or modeled by ARB. Would this plant more closely relate to the look-up table pathway for a coal-fired wet mill or a natural gas-fired dry mill with WDGS? We would argue

that neither of these pathways relates closely to the pathway in question. Is the decision in this case left to the discretion of the applicant?

Further, it appears that the substantiality requirements (i.e., 5 g/MJ threshold and 10 million gasoline gallon equivalent requirement) do not apply to fuels approved under Method 2B. Is this correct?

6. Validation of Applicant Information

ARB says it will verify information provided by applicants if necessary. How does ARB propose to verify and validate information provided by applicants? ARB also suggests it may send information from applicants to third parties for evaluation. Who are these third parties likely to be and what purpose will they serve? How will these third parties be selected? How will claims about energy savings or other process improvements resulting from proprietary/novel processes be independently validated?

7. Trade Secrets/Confidential Information

ARB states that information designated as a trade secret will be treated in accordance with Ca. Govt. Code. However, because every Method 2 application will be subjected to a public comment and hearing process, ARB states that new pathways can be approved “...only if enough information is available publicly to justify that approval.” As we have expressed in previous comments, we are greatly concerned that the public nature of the application process will necessitate the disclosure of information that would otherwise be treated as trade secrets or business confidential. The overly public nature of the process will no doubt discourage businesses developing novel processes based on highly confidential technologies and practices from applying. That is unfortunate since many of these technologies promise to significantly reduce GHG emissions.

8. High Carbon Intensity Crude Oil (HCICO)

We are recommending that the 15 g/MJ (emissions from production and transport) “trigger” for HCICO be reduced to 10 g/MJ. This is because the 15 g/MJ trigger would allow CARBOB with an *actual* carbon intensity of 101.98 g/MJ to be treated as “average” CARBOB with a CI score of 95.06. As such, this provision would allow the use of gasoline from crude oil sources with significantly higher carbon intensity than average crude with no penalties or additional deficit generation for providers of such fuels.

A nearly 7 g/MJ “leniency factor” for crude oil is not justifiable and undermines the stated carbon emission reduction goals of the LCFS policy. Further, ARB has determined elsewhere in the regulation that a 5 g/MJ departure from the default pathway is “substantial” and warrants creation of a new pathway. Why, in this case, is ARB considering a 7 g/MJ increase to be insignificant? ARB has provided absolutely no defensible rationale, data, or modeling to justify its use of the 15 g/MJ factor for determination of HCICO. Why was 15 g/MJ chosen as the threshold for screening potential HCICO fuels? Finally, this provision—which essentially allows a 7 g/MJ “slop factor” for crude oil—is grossly inequitable to other fuels, which are rigidly scored under the regulation to the nearest 0.01 g/MJ.

Conclusion

Thank you again for the opportunity to comment on the draft Concept Paper. We are open to discussing the contents of this letter in more detail with ARB staff should you have any questions or require additional clarification. Finally, we would greatly appreciate written responses to the questions we have raised in this letter, so that we may share those responses with our member producers.

Sincerely,

A handwritten signature in black ink that reads "Geoff Cooper". The signature is written in a cursive style with a large, prominent "G" and "C".

Geoff Cooper
Vice President, Research



Western States Petroleum Association
Credible Solutions • Responsive Service • Since 1907

Catherine H. Reheis-Boyd

President

February 12, 2010

Mr. Dean Simeroth, Chief
Criteria Pollutants Branch, Stationary Source Division
California Air Resources Board
1001 "I" St.
P.O. Box 2815
Sacramento, CA 95812
Via electronic mail to dsimerot@arb.ca.gov

Re. Western States Petroleum Association's Comments on LCFS – January 20 Public Workshop

Dear Mr. Simeroth:

The Western States Petroleum Association (WSPA) is a non-profit trade association representing twenty-eight companies that explore for, produce, transport, refine, and market petroleum, petroleum products, natural gas and other energy products in California and five other western states.

WSPA is submitting the attached comments on the LCFS issues discussed during staff's January 20 public workshop.

As always, WSPA welcomes any feedback or questions relative to our comments. Please contact me or Gina Grey (480-595-7121) of my staff, if you have any questions or comments on the information that is attached. Thank you.

Sincerely,

A handwritten signature in blue ink that reads "Catherine H. Reheis-Boyd". The signature is fluid and cursive, with the first name being the most prominent.

c.c. B. Fletcher, ARB
F. Vergara, ARB
M. Singh, ARB
W. Ingram, ARB
J. Duffy, ARB
J. Curtis, ARB
R. Littaua, ARB
C. Zhang-Tillman, ARB
C. Lozo, ARB
J. Yuan, ARB

WSPA Comments on January 20, 2010 Public Workshop Issues

Regulatory Advisory, LRT

In addition to our longer term concerns regarding the LCFS program, WSPA member companies have immediate concerns regarding the timing and specificity of 2010 compliance reports.

Our concerns are expressed below:

- WSPA learned at the January 20 public workshop that ARB's contract for development of the LCFS electronic reporting tool has expired. ARB staff indicated they will be soliciting open bids and will award a new contract to a software vendor in order to issue a version of the mandatory reporting tool for review and subsequent use. In light of this potential additional delay in delivery of the electronic reporting tool for testing and use, WSPA requests an updated and realistic schedule regarding the requirement to use the electronic reporting tool.
- Regarding timing, the Advisory states the reporting requirements are relaxed for the first quarter of 2010. This would imply that beginning at the start of the second quarter (April 1, 2010) the actual carbon intensity (CI) must be captured in order to be reported in the second quarterly report. It is unrealistic to expect biofuels providers to be registered and have unique CI values by that time. WSPA requests an updated and realistic schedule regarding CI value assignment and reporting.
- A similar situation exists for high carbon intensity crude oil (HCICO). The Advisory states that CARB will not enforce the CI of a fuel or blendstock derived from HCICO until after July 1, 2010. It is unrealistic to expect completion of a 2B process (hearing, associated public notice, etc.) within the time frame proposed. WSPA requests an updated and realistic schedule regarding HCICO value determination and reporting.
- Regarding reporting of CI values for the first quarter of 2010, the Regulatory Advisory issued December 31, 2009 (Advisory 10-01) indicates that reporting parties may report "Unable to Determine" or "Data Unavailable". However, at the 1/20 workshop staff indicated that "default values" should be reported. WSPA seeks clarification regarding what will be required in the reporting tool.

Further, concerning the use of default values vs. using "Unable to Determine" or "Data Unavailable", we have concerns that the LRT (when it is available) will calculate debits and credits and summarize them in an overall compliance determination that individual regulated parties are in or out of compliance; even though there is no carbon intensity reduction standard for 2010. These determinations will not be accurate because they are based on arbitrarily defined defaults. As a result, we support the use of "Unable to Determine" or "Data Unavailable."

- We understand ARB might want to use the default process to continuously field test the LRT, but we assert that work (beta testing) should be done outside the quarterly or annual rule reporting requirements. We note that many WSPA members have volunteered to beta test the draft LRT and provide comments to ARB staff prior to releasing the LRT for general use.

Product Transfer Documents (PTDs)

The Regulatory Advisory states in the Q&A that regulated parties are required to maintain and keep records containing the information specified in section 95484(c) "subject to the technical "work-arounds" and provisions for reporting unavailable data, as described below, and any subsequent guidance that ARB may issue." WSPA believes that more specific work-arounds or provisions need to be outlined specifically for the recordkeeping requirements of the regulation (carbon intensities and transfer of obligations).

It should be recognized that the product transfer documents (PTD's) used for recordkeeping are already being generated now, at the time of the transactions, not months later during the reporting. We urge CARB to provide "work-arounds" or provisions for 1Q recordkeeping and beyond as needed, so that requirements are consistent with the preexisting data contained in PTD's, which include transaction counterparties, transaction date, material name (fuel), and fuel volume. This will provide sufficient data to substantiate the reporting requirements with the existing "work-arounds" until the necessary data is available.

The LCFS regulation has numerous recordkeeping requirements for information in the PTD's. However, this is not a defined term in the regulation, which leads to some potential misunderstandings as to which documents can be used to satisfy recordkeeping requirements.

WSPA believes that the interpretation of a PTD is general enough to include more than the obvious examples of pipeline meter tickets, rail manifests, inspection reports, in-tank custody statements and bill of ladings. The PTD should encompass other associated documents including but not limited to material specification sheets or contracts, provided they are traceable to the transaction and are available and reviewable by both counterparties in the transaction. Within the universe of documents that could be considered PTDs, a regulated party should be able to identify which document it will use to satisfy the regulatory requirements (i.e., one document per transaction).

WSPA requests that CARB provide written concurrence with this interpretation of the term PTD that includes the above mentioned comments.

Handling of Inventory

ARB needs to ensure the LCFS regulation and reporting requirements do not interfere with the normal dynamics of the market at the beginning of each reporting period (quarter) and especially at the beginning of each year. This issue impacts all transportation fuels but is especially critical for those fuels such as ethanol and biodiesel that have multiple CI values.

The LCFS regulation requires that the CI of the fuel be reported on the PTD when title transfer occurs. The LRT does not account for physical inventory. For a given quarter, a party's balance is comprised of production plus imports, plus purchases (where the LCFS obligation transfers), less exports and sales (where the LCFS obligation transfers). This balance or virtual inventory however has a fixed start and end date (the beginning and end of each quarter).

Although a party always has actual physical inventory in California, at the beginning they do not have any barrels in their balance until production, imports or purchases occur. Similarly, at the end of the quarter, a party submits the balance and turns in all of the barrels remaining in its balance.

During the second and third months of a given quarter, a seller can look at its balance and identify barrels of a known CI to sell to someone. However, at the beginning of each quarter, a party will not have any barrels in its balance until production, imports or purchases occur. In this case, the party has no barrels with a specific CI to sell in its balance but the party does have physical inventory to sell. This situation could bring fuel transactions, especially ethanol and biodiesel, to a halt at the beginning of each quarter.

A possible solution WSPA would like to propose, is to allow parties to sell barrels from their previous quarter balances in the following quarter. Such sales should not require adjustment of already reported quantities.

Guidelines for New Pathways

Page 1 (and elsewhere) – Determination of carbon intensity values (including Method 2A or 2B applications) is not limited to regulated parties. Suggest use of the term “fuel providers” instead.

Page 1 – It should be clarified that Section 95486(a) prohibits the use of Method 2A or 2B for CARBOB, gasoline or diesel except in the case of a HCICO that does not have a lookup table value.

Page 2 – The first step in the 5-step process outlined on this page should be merged into the second step, and language should be added clarifying that running CA-GREET could help a fuel provider make a determination as to whether to use Method 1 or Method 2. As currently written, the first step gives the appearance that running CA-GREET is a requirement, which it is not.

Page 4 – In the green parallelograms in the flowchart, we suggest clarifying that only new or revised indirect effects will be considered.

Page 4 – The 30 day public comment period between the determination of completeness and the issuance of staff’s preliminary findings (pages 11 and 19) is missing from the flowchart.

Page 5 (and elsewhere) – Is treatment of co-product credits considered a direct effect evaluated by the applicant, or is it considered an indirect effect that would be evaluated by CARB staff?

Page 6 – Minor point, but LHV should be reported in units of MJ per gallon.

Page 8 – As part of the review criteria, the guidelines indicate that if too much information is classified as trade secret, the application will not proceed. How is this criterion to be objectively enforced? Same question on page 17.

Pages 13 and 21 – The OAL review period should be clarified to state it is 30 *business* days.

Page 26 – WSPA provided comments to ARB on the LCFS on August 28, 2008 (see italicized section below). In our comments was a section on a future certification program. We believe it is worthwhile to include these comments again at this juncture.

Future Certification Program

WSPA agrees that streamlining the process for making Method 2A and 2B changes will be beneficial to the program. However, such streamlining should involve enhancements to the procedures as outlined in the guidelines document, rather than eventual replacement of the guidelines document with some other process.

Under no circumstances should adoption of a certification program include the removal of the lookup table carbon intensity values from the LCFS regulations, as was suggested by staff at the August 5, 2009 Workshop. WSPA believes that the lookup table carbon intensity values must be an integral part of the regulations. The carbon intensity values of fuels and fuel components are the currency of the LCFS: all compliance determinations are based on these values. Investment decisions will be made based on these values, and changes to them will create the risk of stranded capital. Therefore, these values should be explicitly included in the regulation, the same way that the Predictive Model equations are included in the CaRFG regulations. Any permanent changes to these values should only be possible through a public rulemaking process.

In furtherance of the technology innovation goals of the LCFS, it is also important to recognize the need for flexibility, especially in the determination of carbon intensity values for novel fuel pathways that are critical to the success of the program. Such cases could perhaps be accommodated by either an expedited rulemaking process or a provision to grant temporary approval until the rulemaking process can be completed.

Page 27-29 –Crude Oil Screening

WSPA supports the principle of using an efficient process for dealing with crude oils that were not included in the 2006 California baseline crude mix. Developing an efficient process that will not be overly restrictive and have the unintended consequence of further promoting crude oil shuffling will be challenging as new information and systems will likely be needed. Currently, information readily available for crude oils consists primarily of the physical and chemical characteristics of the oil, not the characteristics of the reservoir from which the crude was produced. This is a result of the need for the crude oils chemical and physical characteristics as inputs to economic models used by industry to assist in making crude oil purchasing decisions. We would like to work with ARB's proposed Working Group to develop an efficient process that supports the goals of the LCFS while balanced with a process that is not overly restrictive and inappropriately limits the crude oil flexibility of in-state refineries.

Credits for Off-Road Electric Vehicles

WSPA requests more information on the eligibility requirements for this area of the regulation.

Rulemakings for Fuels Specifications

WSPA will be providing more detailed comments on all of the individual specification regulatory proceedings; however, in general we'd like to emphasize the need to harmonize any California action with ASTM.

We also believe there may be unintended consequences that arise as a result of ARB's fuel specifications efforts. An example is the recently proposed approach on biodiesel and renewable diesel whereby there is a connection between the fuel specification approach selected by ARB, and the LCFS program. This is one of the issues that need to be addressed during the first revisit of the LCFS regulation this year.