



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

Catherine H. Reheis-Boyd
Chief Operating Officer and Chief of Staff

May 7, 2007

Catherine Witherspoon
Executive Officer
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: WSPA Comments on CARB Early Action Listing

Dear Ms. Witherspoon:

WSPA is pleased to submit the following comments and attached materials on behalf of its member companies. We are committed to working cooperatively to develop a workable and effective Low Carbon Fuel Standard (LCFS) program. Implementing an LCFS will not be an easy task. There are several significant constraints to achieving the objectives of the LCFS while at the same time assuring adequate, reliable and affordable supplies of transportation fuels to California's consumers.

Additionally, if the LCFS is listed as an early action, the ARB faces some difficult rulemaking challenges, such as:

- AB 32 could not be clearer in requiring all greenhouse gas (GHG) measures to be cost effective. AB 32 further requires the ARB to rely on the best available economic and scientific information. The April 20, 2007 staff report does not describe how ARB will make the required cost effectiveness determination.

We are particularly concerned about the statement on page 13 of the ARB staff report that the LCFS measure "is likely to be technically feasible and cost-effective." ARB should not presume that a selected strategy is or can be made to be cost-effective or technically feasible.

- The statute requires the early action measures to meet the same cost effectiveness criteria and standards as all other GHG reduction measures required by the Act.
- Since the LCFS is a fuel regulation, ARB also must follow the proper processes and comply with the standards and criteria that apply to fuels regulations. This includes adhering to California's H&S Code § 43013, as well as reconciling and complying with the requirements of all other applicable state and federal laws. Section 43013 requires the ARB to make findings

and determinations of cost effectiveness and technological feasibility and to quantify the impacts on affected segments of the economy.

In the following sections of WSPA's statement, we:

- Identify the constraints that need to be addressed or overcome to maximize the success of achieving the LCFS;
- List specific recommendations and concerns in making listing decisions as well as issues to be considered if the LCFS is listed and becomes the subject of rulemaking; and,
- Outline the legal issues pertaining to the listing and rulemaking processes of the LCFS.

Constraints to Achieving the Objective of the LCFS

Listed below are several significant constraints that we believe need to be addressed or overcome:

- Biofuels are in increasingly higher demand and might not be available to supply California. The President has suggested a five-fold increase in the federal renewable fuel mandate. Fleets are using increasing volumes of biofuels, and several states have or are considering biofuels mandates. California will be competing for these supplies with other U.S. states and with other countries. The ARB and CEC will need to incorporate the effect of this global competition for biomass in their assessments.
- The early-year progress of the LCFS may be achieved by low-level blends of first-generation biofuels in conventional gasoline and diesel. However, meeting the LCFS's 10 percent reduction in carbon intensity will likely require significant volumes of second generation, low-carbon-intensity biofuels. The technology for cost-competitive, commercial-scale production of these fuels does not yet exist, despite decades of work.
- There have been assertions made that California may be able to produce some or even all of the biomass needed for compliance with the LCFS. Reliance on California-produced biomass to any degree should consider the landmass, regulatory and other requirements necessary to enable and support this production.

Even with meaningful technology breakthroughs, it may be difficult in California in the contemplated timeframes to obtain the approvals necessary to build a large alternative fuels industry. This is a real vulnerability, given the significant land use, water use and hardware requirements of a cellulosic or other biomass-based industry.

- The most energy efficient use of biomass is for power generation, rather than biofuels, so a more sensible state strategy may be to encourage biomass use for electrical generation. In any case, future biofuels may be competing with electrical generation for limited biomass resources.
- Vehicle technologies and sales will have to be in synch with fuel technologies and availability.
- It is essential that the LCFS be designed and implemented in ways that will not discourage further investment in petroleum-based fuels infrastructure. CEC projections over the next

several years show a growing gap between gasoline and diesel demand and the ability of the state's refineries to supply those fuels. This is despite the assumption that the auto industry will achieve the mileage efficiencies required under AB 1493. There is an overwhelming need for additional supplies of petroleum products to keep California's economy growing, even as low carbon fuels penetrate the transportation fuels market.

In short, several real constraints impact the ability of transportation fuel suppliers to supply their California customers, including the availability of large volumes of low-carbon fuels and conventional fuels to meet the transportation fuel requirements of the large and diverse California markets.

It is essential that the LCFS program contain scheduled milestones at which time progress toward achieving the standard are assessed by objective and measurable criteria, and policy makers are alerted to the potential for disruptions in transportation fuel supplies and associated market volatility.

We envision a stepwise implementation process in which the CEC and ARB review and evaluate progress. They would jointly make a determination that adequate LCFS fuel supplies and infrastructure are in place to allow implementation of the next steps of the LCFS in an orderly manner and with minimal disruption to the state's transportation fuel market.

Recommendations and concerns for ARB's consideration in making its listing decision as well as issues to be addressed if the LCFS is listed and becomes the subject of rulemaking

We have attached a copy of WSPA's April 2, 2007 letter to Brian Prusnek (Attachment 2), which we ask be made be part of the record of these proceedings. That letter contains several comments, recommendations, and concerns about the LCFS. We also have the following additional recommendations and concerns:

1. WSPA is concerned about the "presumption" contained in ARB's April 20 Early Action staff report that the LCFS measure "is likely to be technically feasible and cost-effective." ARB cannot presume without an adequate factual and scientific basis that a selected strategy is or can be made cost-effective. ARB must comply with the provisions of AB 32, the H&S Code sections pertaining to fuel regulations, the Administrative Procedures Act, and all other applicable state and federal laws pertaining to fuels regulations.

That does not mean that ARB must wait until all the scientific and other technical questions are answered with certainty. For example, when listing diesel particulate matter as a toxic air contaminant, the ARB directed staff to continue reviewing the effects of reduced exposures from the full implementation of existing regulations and evolving vehicle and fuel technologies.

2. In order to determine the costs and effectiveness of the LCFS in a scientifically valid manner, as required by AB 32, the ARB must develop and adopt a comprehensive and valid set of methods for evaluating the effectiveness of all the fuels that may be used to comply with the LCFS.
3. In his August 23, 2005, letter to legislative leaders the Governor identified the following as important priorities for state energy policies:
 - adequate and reliable energy supplies;
 - affordable energy to households and businesses; and

- advanced energy technologies that protect and improve economic and environmental conditions.

ARB should consider the effects on gasoline supply of adding ethanol to gasoline in compliance with the predictive model. When meeting with individual companies in connection with the ongoing predictive model revision and when reviewing the producibility analysis being performed by the CEC, ARB should focus attention on several important issues. They include the impact the predictive model may have on the ability of the individual companies to produce gasoline as well as the extent to which the model will contribute to helping meet GHG goals.

4. We encourage the ARB to use working groups extensively in dealing with some of the key technical issues. This request is consistent with ARB's approach in several rulemakings, including the current predictive model proceeding.

We also strongly urge ARB to formally establish a technical collaborative process, such as described in Attachment 1. We believe this is essential to help develop two important and credible technical tools. These tools are necessary to implement successfully a scientifically and technically sound and cost effective LCFS and to assure that the ARB relies on the best available economic and scientific information. These tools include:

- A widely accepted and accurate full fuel cycle analysis method. It is noteworthy that the May 1, 2007 UC draft, *A low-carbon Fuel Standard for California* says there is no widely agreed on full-cycle analysis method, none has undergone rigorous review, and the products of the existing fuel cycle analysis are "in many cases highly uncertain." It confirms that further review and development of a widely accepted, credible full cycle analysis tool are necessary.
 - A California-specific dynamic simulation transportation energy model to evaluate and compare various LCFS scenarios for their economic impact. The CEC has recognized the need for such a model and has begun work on this critical ingredient to enhance the ability to evaluate the economy-wide and sector-specific impacts of LCFS measures. This model can help assure the rules are cost effective and equitable within the requirements of AB 32. Attachment 1 identifies how a collaborative process can assist in expediting and bringing the financial resources and expertise to advance the delivery of this valuable tool within the timelines of AB 32 and the LCSF.
5. The LCFS program should have firm, well-defined scheduled milestones. At these milestones, CEC and ARB should review and evaluate progress. They should also jointly make findings and determinations and provide complete, transparent reports to the Governor and Legislature on:
 - The availability of adequate and affordable LCFS fuel supplies and infrastructure in place to allow implementation of the next step of the LCFS in an orderly manner and with minimal disruption to the state's transportation fuel market;
 - A measurement of the cost effectiveness of the LCFS compared to other greenhouse gas control measures as well as the total cost of the program to the state's economy; and,

- A measurement of the progress of the commercialization of the technologies needed to achieve the objectives of the LCFS; one such measure might be the volumes of low-carbon fuels (say 50 percent carbon intensity or less) compared with the scenario analyses done to support the program's adoption.

We understand reluctance to having a "safety valve" that could affect the technology forcing nature of the LCFS, but this need not be viewed as such. It is important for the state to track fuel supplies over time and alert policy makers if there are potential supply or market issues.

This approach provides the lead time necessary to implement contingency measures like those implemented in the 2001 electricity crisis, including extraordinary supply transactions, expedited siting and permitting, and contingency plans. We think such a process is necessary and prudent and is consistent with H&S Code §38599, which gives the Governor authority to adjust deadlines in the event of extraordinary circumstances.

6. The LCFS white paper and April 20, 2007 ARB staff analysis imply that the LCFS program may contain mandates that providers of certain fuels must also provide fuels that they do not produce or provide directly to their California customers. We question the policy, technical, economic, and legal bases in AB 32 for requiring providers of some fuels to provide to their California customers fuels that they do not produce. There are policy, technical, economic and legal obstacles to providing different kinds of fuels to consumers in California and ARB has not analyzed these obstacles.

Of course, the LCFS need not contain mandates that providers of one fuel must provide other fuels to their customers. Like a SIP, the state can retain overall responsibility for meeting overall performance goals of the LCFS while individual transportation fuels providers, like those who provide gasoline and diesel fuels, take responsibility for the performance of the fuels that they do produce and do provide to their California customers.

To provide non-monetary incentives for fuel providers under HSC § 38561(b), the ARB should allow fuel providers to earn GHG reduction credits for providing to their California customers low-carbon fuels that the providers do not currently produce. ARB should include such non-monetary incentives from the outset of the LCFS program.

7. We urge ARB to use caution comparing California GHG requirements, regulations, and program specifics with those of Europe. There are some important differences between the two. Europe's transportation fuels markets are different than ours. For example, diesel comprises a much larger part of Europe's fuels markets. Also, Europe's regulatory schemes are less enforcement and penalty driven and more compliance driven.

California's CEQA requirements and EJ concerns also add significant hurdles and time to permitting and constructing any infrastructure upgrades that may be necessary to produce and distribute alternative fuels.

8. If ARB lists the LCFS as an early action and adopts an LCFS rule by 2010, it appears that WSPA members will have no time to install any significant facilities to meet any initial LCFS performance requirements. As ARB and CEC are aware, it typically takes at least four years to plan, design, permit, and construct new facilities or modify existing facilities in California, if the permitting approvals can be obtained at all. It will also take months and years to design

facilities and change operating methods to meet performance requirements established for the later years of the LCFS program.

Therefore, in order to meet the cost-effectiveness requirements of AB 32, the LCFS must be phased in over time so that there will be adequate time to construct facilities and change operations. Each phase - its scope, its timing and its performance level - must itself be cost-effective. It must also be based on the best available economic models, emission estimation techniques, other scientific methods, as well as the best economic and scientific information available at the times of the LCFS phases. Likewise, each phase should stimulate advanced technology.

9. WSPA appreciates that the LCFS is intended to be market-based. To that end, we urge the ARB to avoid choosing or anticipating technologies either overtly or within the life cycle analysis. For example, most of the information supporting Executive Order S-01-07 suggests E85 as a likely contributor. That may or may not be valid in the long run, and a costly commitment to that or any other technology at this time may divert capital and other resources from the development and deployment of more cost-effective and technologically feasible technologies.

Further, the compliance timeline for the LCFS should be carefully considered in order to allow for and encourage technological innovation in low carbon fuels. A poorly designed compliance timeline could force industry into dead-end solutions thereby greatly reducing the incentive for further innovation.

Additional Legal Issues Pertaining to the Listing and Rulemaking Processes of the LCFS

1. ARB's draft staff report only describes those three measures that are proposed as "discrete early action measures." None of the other "later" GHG reduction measures is described or analyzed in any detail at all. To provide a sufficient basis for its decision to list certain measures as "discrete early action measures" – and defer others to later adoption – ARB must analyze all candidate GHG reduction measures in equivalent detail using the same standards and criteria.
2. The Act requires ARB to "rely upon the best available economic and scientific information and its assessment of existing and projected technological capacities" when adopting GHG reduction regulations. (See HSC § 38562(e)). Without any cost effectiveness analysis whatsoever, it cannot be said that ARB is relying upon the "best available economic and scientific information" when listing the LCFS for adoption.
3. AB 1493 (Pavley) similarly directed ARB to adopt regulations to achieve maximum feasible and cost-effective reduction of GHG emissions from motor vehicles. ARB analyzed cost-effectiveness in detail in that case¹, and should do the same for the LCFS.

¹ For example, ARB followed this approach for motor vehicle GHG reduction measures: "Cost effectiveness is a measure of the cost imposed per ton of reduction achieved, and thus is a useful tool to compare various possible approaches. . . . ARB staff has estimated the average cost increases by model year, using data from the NESCCAF study and other sources. Staff has used these cost data . . . to calculate the total annualized costs by calendar year. . . . Staff also estimated annual savings in operating cost, again based on information provided in NESCCAF as well as other sources. . . . The cost effectiveness in dollars per ton for a given calendar year is calculated by dividing the total annualized costs for that year by the total CO2 equivalent emission reductions for that year. The CO2 equivalent emissions benefits of

4. The Act requires that GHG measures be adopted by regulation, after considering many factors and allowing public review and comment and administrative hearings. In particular, the Act also requires ARB to adopt regulations in an open public process (HSC § 38560). The public cannot participate in a meaningful way if ARB does not describe the methodology it will use to determine cost-effectiveness of LCFS and all other GHG reduction measures. The ARB staff analysis does not describe the cost-effectiveness methodology that ARB will use, contrary to AB 32.
5. The California APA requires an agency to explain fully the rationale for each regulation it proposes to adopt. The agency should provide its rationale in an Initial Statement of Reasons. Gov. Code § 11346.2. The statement must include, but not be limited to, the following:
 - Statement of specific purpose and rationale (Gov. Code § 11346.2(b)(1));
 - Identification of supporting studies (Gov. Code § 11346.2(b)(2));
 - Description of reasonable alternatives (Gov. Code § 11346.2(b)(3)(A));
 - Description of reasonable alternatives to reduce adverse impact on small businesses (Gov. Code § 11346.2(b)(3)(B));
 - Factual support for no significant adverse economic impact on business (Gov. Code § 11346.2(b)(4)); and,
 - Statement of non-duplication and no conflict with similar federal regulations unless justified by law, by cost benefit analysis, or by both factors (Gov. Code § 11346.2(b)(5)).
6. The ARB staff draft does not meet these minimum legal standards in proposing to list the LCFS as a “discrete early action measure.”
7. ARB prepared a statement of reasons for the listing of diesel exhaust as a toxic air pollutant, and it should do so for the listing of the LCFS as a “discrete early action measure”. Please see also Govt. Code 11346.2 (requiring an agency to prepare a statement of reasons).

Further, before ARB adopted its resolution to list diesel exhaust as a TAC, it reviewed the results of studies and research projects approved/funded by ARB, as well as scientific reports by other governmental agencies and research institutions. Similarly in this case, ARB is required to provide scientific and factual bases – and may not rely on its mere presumption – to support its assertion that the LCFS is a better or more cost-effective early action measure than other possible early action measures.

WSPA has provided ARB with the comments in this letter and the attached materials in the spirit of collaboration. We want to work closely with you to ensure that implementation of the LCFS (and AB32) meets the goals of the Governor’s Executive Order and of the bill.

the proposed regulation are 87,700 tons per day in 2020 and 155,200 tons per year in 2030. Converting these figures to annual totals yields 32 millions tons per year in 2020 and 56.7 million tons per year in 2030. Table D-1 below provides the cost effectiveness in calendar years 2020 and 2030 based on the annualized vehicle costs and the estimated benefits.” *Final Statement of Reasons* (August 4, 2005), pp. 11-12.

However, we also must ensure that implementation of these initiatives does not result in unintended negative consequences. These might include reducing transportation fuel and other energy supplies to consumers, price volatility, and damage to the state's economic growth potential, or to the economy and quality of life of every California consumer.

We can and must "get it right".

Sincerely,

A handwritten signature in black ink, appearing to read "Cathy A. Boyd". The signature is fluid and cursive, with the first name "Cathy" and last name "Boyd" clearly legible.

cc: Brian Prusnek, Governor's Office
David Crane, Governor's Office
Dan Sperling, UC Davis
Alex Ferrell, UC Berkeley
Linda Adams, CalEPA
Jackie Pfannenstiel, CEC
Bob Sawyer, CARB
Dan Skopec, CalEPA
Mike Scheibel, CARB
Dean Simeroth – CARB
Chuck Sulock – CARB
Richard Bode – CARB
Michael Robert – CARB
Alberto Ayala – CARB
Joe Sparano, WSPA
Michael Barr – Pillsbury, Winthrop, Shaw, Pitmann LLP

Attachment 1: Low Carbon Fuel Standard Technical Collaborative

Attachment 2: WSPA letter to Brian Prusnek, dated April 2, 2007

Attachment 1

Low Carbon Fuel Standard Technical Collaborative

Objective:

Assemble a broad-based, representative, and technically competent public/private collaborative to provide input into the LCFS regulatory process, specifically to address key technical and economic elements of the Low Carbon Fuel Standard (LCFS), such as:

- Further review of and improvements to the full fuel cycle analysis;
- Develop a California-specific dynamic simulation transportation energy model to evaluate and compare various LCFS scenarios for their economic impact; and,
- Other technical elements as appropriate.

The Collaborative would also seek enhanced funding sources and any other resources, national and international, that may be needed to advance the technical credibility of these tools. It would be known as the Low Carbon Fuel Standard Technical Collaborative.

Background:

AB 32 requires all greenhouse gas measures, including the LCFS, to be based on the best available scientific analysis. They must also be cost-effective and technologically feasible. They must not cause potential for disproportionate impacts on low-income communities or other disadvantaged sectors or on small business. And they must not cause a significant loss of benefits due to leakage.

Equally important, to be successful the LCFS must be based on credible scientific and economic support. That is not always achieved in contentious regulatory proceedings.

Two very complex and technical tools that are necessary to fully evaluate the feasibility and cost effectiveness of the LCFS are the full cycle fuel analysis and a dynamic simulation model of California's transportation fuels market.

- The Collaborative would utilize the CEC TIAX full fuel cycle analysis to enhance and improve upon that tool to compare the global warming potential of various fuel paths. Members of the Collaborative will be encouraged to bring their own technical expertise as well as any available information, analyses, or consultant resources to assist and enhance the full fuel cycle analysis tool.

It is noteworthy that the May 1, 2007 UC draft, *A low-carbon Fuel Standard for California*, says there is no widely agreed on full-cycle analyses method, none has undergone rigorous review, and the products of the existing fuel cycle analyses are "in many cases highly uncertain." It confirms that further review and development of the full cycle analysis tool are necessary.

- The Collaborative would work with the CEC and CARB on expediting the development of a Dynamic Simulation Transportation Energy Model (DynaSim). The CEC has recognized this

model as a critical element to analyzing transportation fuel options and has begun work on its development and future delivery. This model would serve as the tool to compare the pathways identified in the fuel full cycle analysis to help avoid unintended consequences of each fuel option. This tool would help identify the economic effects and cost-effectiveness of a mix of transportation fuel options to successfully meet the requirements of AB32. The Collaborative could take advantage of the expertise from the CEC's Technical Project Manager for the development of the DynaSim model in a soon-to-be-issued CEC RFP for \$355,000. It is envisioned the Technical Project Manager will manage and coordinate the planning, design, development, testing, and pilot phases of the DynaSim software development vendor.

The Collaborative would bring all available expertise, in-house and external, to the process to achieve the objectives within the timeline outlined in AB32 and the ARB process.

Structure:

The structure of the Collaborative should be broad based and represent industry, environmental, academic, public, and agency expertise. The Collaborative would work with ARB to develop a structure and process to successfully implement the objective.

The Collaborative could be a two-level structure -- a Policy Committee and Technical Advisory Committee as appropriate to carry out the program of work. The Technical Advisory Committee would utilize its technical expertise to recommend actions to the Policy Committee. The Policy Committee would consider the advice and recommendations of the Technical Advisory Committee and decide how to allocate funds to achieve the agreed upon objectives.

Timeline:

The Collaborative would work closely with the ARB and would complete its work and achieve its objective within the timelines specified in AB32 and CARB's timeline for the LCFS.

Funding:

The Collaborative would develop the funding required to achieve the objective. The Collaborative would develop a successful funding formula to carry out its program of work.

The funding formula for the Collaborative would include equitable portions from federal, state and local government, industry, environmental, academia, and other entities the Collaborative deems appropriate. Equitable portions could be both financial and in-kind contributions to encourage participation and not exclude those without available financial resources.

The Collaborative would identify other potential sources of funding outside those referenced above, including international, to augment the funding formula.

The Collaborative would work with the Administration and California Congressional delegation to secure the federal and state portions of the funding formula. The information developed by the Collaborative will be transportable to other parts of the nation and internationally.

May 3, 2007

Attachment 2



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

Catherine H. Reheis-Boyd
Chief Operating Officer and Chief of Staff

April 2, 2007

Mr. Brian Prusnek
Governor's Office
State of California
State Capitol
Sacramento, CA 95814

Re: Low Carbon Fuel Standard (LCFS)

Dear Brian:

Thank you very much for arranging the March 19 meeting to discuss the Low Carbon Fuel Standard (LCFS). The exchange was timely, important, and constructive. WSPA and its member companies are committed to working cooperatively with you and your colleagues in the Administration to develop a workable and effective LCFS program. To help continue the dialogue we would like to:

- A. Offer key elements of a beginning framework for a low carbon fuel standard;
- B. Identify infrastructure and regulatory constraints that are making it difficult to meet California's growing demand for transportation fuels and may equally threaten development of a workable and effective LCFS program; and,
- C. Identify policy areas needing further detailed discussion and confirm action items identified in the meeting.

A. The following suggestions are the key elements of a beginning framework for a low carbon fuel standard

1. For many of the reasons given in Section B, below, the program should have meaningful scheduled milestones. At these milestones, the Energy Commission would be required to make periodic findings and determinations and provide complete, transparent reports to the Governor and Legislature on the availability of adequate and affordable future supplies of transportation fuels to the state's consumers.

We understand your concerns about having a "safety valve" that could affect the technology forcing nature of the LCFS. At the same time, it is important for the state to track fuel supplies

over time and alert policy makers if there are potential supply or market issues. This approach provides the lead time necessary to implement contingency measures like those implemented during the 2001 energy crisis, including extraordinary supply transactions, expedited siting and permitting, contingency plans, and the like. We think such a process is necessary and prudent.

The following items in this section are aimed at keeping the LCFS simple, workable, and enforceable. We are continuing to discuss and refine these items, and, hopefully, we will have more detail on them for you in the next several weeks.

2. It is critical to consider all crude oils as equal for purposes of the wells-to-tank calculations, including crude oils produced by thermal enhanced oil recovery, water injection, and CO₂ floods. We believe this much simpler approach is consistent with the goals of the LCFS.

While we understand your concerns about new, substitute crude oils such as oils from oil sands and oil shale, it is difficult to see how a system can be developed that would effectively prevent use of such crudes outside of California as a result of “leakage” or “shuffling.” We suggest a stepped approach whereby all crude oil is considered equal while the state determines how substitute crude oils should be addressed in the future.

3. There needs to be clear, transparent, fact-based and certain method and process for initially determining the carbon intensity of fuel families or categories and for recognizing technology improvements that could reduce those intensities over time. Business planners need to be able to make reliable, long term business and investment decisions based on these values or factors.
4. The executive order establishing the LCFS describes the standard as applying to transportation fuels, yet the accompanying white paper suggests the intended scope as passenger vehicle fuel. There needs to be clarity on the scope of the LCFS. According to the California Alternative Fuels Market Assessment 2006 prepared for the CEC, the light duty fleet accounts for about 80 percent of vehicle fuel consumed within the state.
5. Petroleum-based gasoline and diesel should be set as the baselines against which corresponding alternative vehicle fuels are compared. This makes sense for several reasons. California refineries are efficient and there are not a lot of opportunities for significant reductions in the carbon intensities of petroleum-based fuel products. Refineries are very complex and it would be difficult to assign accurate carbon intensity factors to specific products.

For example, there are numerous products from most units in a refinery, and there is no clear way to assign energy usage to each product. To provide an incentive to reduce facility CO₂ emissions, if there are developments in refinery process technology or other factors enabling refiners to achieve significant process efficiencies or to produce petroleum-based products having lower carbon intensities than the baseline, refiners should be able to qualify lower carbon intensity factors to these new petroleum-based products or receive emission reduction credits.

6. Default carbon intensity factors should be set for appropriate families, categories, or production processes for alternative fuels, such as cellulosic ethanol or corn-based ethanol having similar energy inputs. Fuels producers should have incentives to produce low carbon intensity fuels. Producers should be allowed to “qualify” in a relatively simple manner those fuels or processes that have a significantly lower carbon intensity factor than the default.

7. Promising technologies are emerging. The LCFS should encourage development of new, less carbon intensive manufacturing technologies and new biomass-based fuels beyond today's ethanol and food feedstock-based biodiesel. A poorly designed LCFS, including an unrealistic timeline, may well lock industry into the use of present technology and stifle innovation.
8. The LCFS program should be compatible with the federal renewable fuel standard, including its tracking and reporting system, as well as with other regulatory programs.
9. There should be maximum consideration given to the need for product fungibility, transport, and storage, in order to minimize the need for substantial infrastructure modifications and duplications in the product distribution systems.
10. There should be fair and equitable treatment among fuel types and suppliers. All providers of transportation fuels and energy should be subject to the same market risks as well as the same reporting, monitoring, and enforcement requirements.
11. The standard should be phased in with sufficient lead times to plan, design, permit, and install the required production, storage, and transportation facilities.

B. Infrastructure and regulatory constraints are making it difficult to meet California's growing demand for transportation fuels and may equally threaten development of a workable and effective LCFS program

1. It is essential that the LCFS be designed and implemented in ways that will not discourage further investment in petroleum-based fuels infrastructure in California. California Energy Commission projections show over the next several years a growing gap between gasoline and diesel demand and the ability of the state's refineries to supply those fuels, despite achieving the mileage efficiencies required under AB 1493. There is an overwhelming need for additional supplies of petroleum products to keep California's energy supplies secure and its economy growing.

While petroleum conservation and vehicle energy efficiency must be advanced in order to reduce the rate of growth of petroleum demand, mandating petroleum reduction to below current levels is simply incompatible with the needs of California's growing population as well as its growing economy.

2. Despite credible projections by the Energy Commission that the state will be increasingly dependent on imported products, crude oils, and blend stocks, including alternative fuels, the ports of Los Angeles and Long Beach are currently advancing policies and practices that may reduce the capacity to import crude oil or liquid fuels or blendstocks of any kind, conventional or alternative.
3. Since more CO₂ reductions are achieved using biocrops to generate electricity rather than biofuels, a more sensible state strategy may be to encourage biomass use for electrical generation. In any case, in the future biofuels may very well be competing with electrical generation for limited biomass resources.
4. While there may be scenarios that suggest the 10 percent low carbon fuel standard can be achieved without significant technology breakthroughs, we think it will be difficult if not

impossible to accomplish without the commercialization of cellulosic or other technologies for producing second- or later-generation low carbon fuels.

Mandates in other states, a likely very large increase in the federal renewable fuel standard, and other factors are increasing demand for available renewable fuels across the nation. The entire potential supply of U.S. renewable energy resources will not be available for California's sole use. It would be helpful if you could share any scenario analyses you have developed.

5. Even with meaningful technology breakthroughs, it may be difficult in California in the contemplated timeframes to obtain the approvals necessary to build a large alternative fuels industry, particularly given the significant land use, water use, and hardware requirements of a cellulosic or other biomass-based industry.
6. The state should consider the range of unintended consequences of large-scale increases in biomass production, just as it would evaluate the environmental and other impacts of large-scale increases in the production of petroleum-based fuels. There are GHG and other environmental and social issues associated with this increased production. If not addressed, these potential consequences could result in a loss of public confidence in and support for these programs.

C. The following items from the meeting needing further discussion

1. Milestones: Sensible milestones can help assure the technology forcing nature of the rule is not compromised, needed technology breakthroughs are in fact occurring, and policy makers are alerted to the potential for disruptions in transportation fuel supplies and associated market volatility.
2. Credits: More work and discussion are required in this area. The concern was expressed that credits should not be used to pick the low-hanging fruit and compromise the technology forcing element of the LCFS. On the other hand, GHG emission reductions are the primary objective of the program and the broader the credit trading program, the more cost effective are the reductions and the more room for innovation in ways that nobody can now anticipate.

It is not apparent how a credit system could work within the LCFS and encompass liquid fuels, gaseous fuels, and electricity, as well as between regulated and unregulated companies, industries, and markets.

We encourage the creation of a focused effort to develop the most flexible credit system possible while ensuring that the generation of credits occurs on a level playing field. It may be important that the credit system include opportunity to generate credits by reducing the carbon intensity of fuels not subject to the LCFS and apply those credits toward LCFS compliance. In addition, we encourage more discussion and understanding about how allowing credits from outside the transportation fuels supply chain could affect innovation in alternative fuel technology.

3. Compliance point: Where in the supply chain do the standard and therefore, the enforcement apply? We should consider real-world market operations and functions in developing effective and practical compliance in light of the tremendous volumes of liquid fuels flowing through

California and interconnected markets. We should also consider consistency with other regulatory programs in the interconnected markets.

4. Double regulation of emissions: Given that many of the wells-to-tanks emissions are also facility emissions subject to the AB 32 program for stationary sources, we should be careful not to double regulate emissions (and credits) and to eliminate unnecessary overlap. The AB 32 and LCFS programs should be tightly harmonized.
5. Confidentiality: As you can now see, the companies participating in this industry are highly competitive. The Legislature has recognized the need to collect sensitive competitive information but also provide extraordinary protection of confidentiality. The confidentiality protections under the Energy Commission's Petroleum Industry Information Reporting Act (PIIRA) program are a model for you to consider. See <http://www.energy.ca.gov/oil/piira/>
6. Constraints: Consider the constraints identified in B., above, including port policies and practices regarding liquid fuels.
7. Predictive model: When meeting with individual companies, ARB should focus attention on the impact the model may have on the ability of an individual company to produce gasoline as well as the extent to which the model will contribute to helping meet GHG goals.
8. Unconventional crude oils: As noted in A.2., the approach taken to address new substitute crude oils should not penalize in-state oil production, current crude slates, or the use of other heavy oil by refiners to meet growing fuel supply demands.

Finally, we want to again thank you for your interest. It was clear from the meeting that you are seriously interested in a practical, market-based approach to implementing the LCFS. We share that view.

We are eager to continue our efforts with you and the others involved to deal with some of the outstanding issues. And we will, of course, continue to be heavily involved in the administrative process implementing the LCFS.

Eloy Garcia will be calling you in the next few days to set a follow up meeting to continue the discussion.

Sincerely,



Catherine Reheis-Boyd
Chief Operating Officer
Western States Petroleum Association



Eloy Garcia
KP Advocates for WSPA

cc. David Crane
Dan Sperling
Alex Farrell
Dan Skopec
Mike Scheible
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