



Western States Petroleum Association  
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President

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1516 Ninth Street  
Sacramento, CA 95814-5512

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**Docket No. 06-AFP-1 Alternative Fuels Transportation Plan**

The Western States Petroleum Association (WSPA) would like to provide below our written comments on the AB1007 Plan that was distributed for comment last week. WSPA's 26 member companies are engaged in the exploration for, production, refining, transportation and marketing of a variety of energy and transportation fuels products. This Plan is therefore of prime importance to us.

We believe that the AB1007 Plan, or California's Alternative Fuels Transportation Plan, is where energy supply and air quality needs meet. A strong partnership between these two critical elements is essential to successfully diversify California's transportation fuels portfolio in a way that doesn't have a negative impact on either air quality or the state's economy.

AB1007 is directly linked to the LCFS which makes it even more important. We cannot afford to get our energy supply future wrong. We do not want to end up with unintended consequences that prevent us from supplying adequate, reliable and affordable fuels to California's consumers.

There are many uncertainties and unanswered questions in this complicated process. What's important to us is that the assumptions used are reasonable and that the process designed going forward improves upon the knowledge base and tools needed to choose the best fuels pathways to meet the goals - pathways that are scientifically sound, technologically feasible and cost effective.

WSPA appreciates the opportunity to submit these comments. We would also like to meet with the CEC to review our concerns and suggestions in even greater detail.

Sincerely,

**Western States Petroleum Association's Comments on the CEC/CARB Draft State Alternative Fuels Transportation Plan – October 2007**

**Report Structure/Content**

The report provides an executive summary of the AB 1007 work process. For example, the discussion on Life Cycle Analysis (LCA) is only 4 -5 pages long, whereas the TIAX report on LCA was almost 300 pages long. The Scenario Analysis for Penetration of XTL Fuels was 51 pages long but only appears as a notation a couple of times in the report. Also, there is little to no substantiation that supports the claims made or illustrates the reasoning used to determine optimal blends, or societal cost effectiveness.

Staff has indicated all of the background assumptions and calculations are contained in separate documents that will be on the website soon. We recommend the background documents be referenced and/or presented as attachments to the report to help document how statements and conclusions have been arrived at for the final Plan report.

In addition, it would have been valuable to have shared the detailed background documents with the public at the same time the Plan went out for comment, so there would have been an opportunity to understand and comment on the Plan appropriately. As it is, stakeholders cannot comment on much of the Plan's figures and conclusive statements.

As previously noted in many workshops, WSPA encourages a Plan that clearly outlines the degree of uncertainty in its numbers and its conclusions. The Plan needs more caveats, ranges in numbers, and cautionary language that would provide a decision maker with a sense of how robust the projections and conclusions are.

**Goals of Plan**

One of the original AB1007 main objectives, as outlined in the legislation, was to increase the use of alternative fuels in the State. In the Plan there is a new strong focus on satisfying the goals of multiple state policy objectives, including reducing GHGs, increasing the in-state production of bio fuel, and meeting the Low Carbon Fuel Standard (LCFS).

It appears the AB1007 study has expanded beyond its original intent to attempt to satisfy a broader list of state objectives. Evidence of this exists throughout the report; however one example is on page 32 in the chapter on alternative fuel use goals. Table 4 lists only fuel use and MMT/yr GHGs. There are many goals and criteria beyond these two that need to be addressed and highlighted.

WSPA recommends the State develop a clear, deliberate process (perhaps a model) whereby multiple alternative fuels can be judged based on multiple state goals. It is our understanding that the CEC is pursuing this path, with the development of a dynamic energy simulation model. We agree with this approach and encourage the CEC to follow through. It appears certain select goals were given more weight than others in the final analysis. The state needs to define transparently the mechanisms for balancing tradeoffs between policy goals.

### **Plan vs LCFS**

Although the Plan discusses the LCFS in general, there is very little discussion around the very real possibility that at this point the Plan, with its recommended multiple billions of dollars of incentives, may be much less important for the introduction of bio fuels than the LCFS will.

This needs to be explored in the Executive Summary of the report. That would allow policymakers to understand how this effort has evolved over time, and, additional thought may be needed in terms of recommendations due to the more recent and possibly much more significant LCFS development. How the two plans relate and integrate would be helpful to understand.

### **Air Quality**

The Plan says, "No significant degradation in air quality, water quality, or the environment will result from increased use of alternative fuels." If this statement is meant to be an outcome, we do not have a basis to agree or disagree with it, however the LCA work to date does not seem to support this, nor do many of the recent studies on alternative fuels.

In fact, the recent work by CARB in revising the Predictive Model to attempt to deal with ethanol permeation and increased VOC emissions is a case study for how alternative fuels such as ethanol can often lead to unintended consequences and impacts on air quality.

It is interesting that on page ES-8 of the Plan it states the Plan is meant to meet California's goals – one of which is to not cause a "material" increase in emissions. We request a definition of "material" to determine whether this is different from "significant".

Is the State ready to allow tradeoffs by permitting increases in certain environmental stressors in order to allow an increase in alternative fuels? How will this non-significant increase be compensated for? This is a fundamental policy issue for both the energy agency and the air agency.

### **Fuel Diversity without Mandates**

WSPA continues to agree that the state should move to a more diverse transportation fuels future which will include cleaner-burning conventional fuels as well as renewable and alternative fuels. We agree with the approach in the Plan that does not recommend mandates for certain types of fuels or certain percentages of blends of fuels. Consistent with the LCFS, we should not pick winners and losers, but allow flexibility in meeting performance objectives.

### **Role of "renewable" Diesels**

We are encouraged the 2050 Vision Forecast includes measures dealing with energy efficiency that forecast a role for diesel. We agree that renewable diesel fuel along with improved engine and after treatment technology may play a key role in the future. One concern we have is that the Executive Summary does not seem to include mention of the role of light-duty vehicles that run on bio diesel and renewable diesel.

On page 23, Figure 4, it excludes the Well-to-Wheels evaluation of light duty diesel vehicles with B20 and Renewable 30% blends, valued at 36 and 41% GHG reduction respectively.

This is a significant GHG performance as opposed to the other longer term, more expensive options. Earlier AB1007 reports observed that dieselization was one of the near term solutions. WSPA questions what happened to that conclusion, and recommends that dieselization be included in the Executive Summary.

### **Market Mechanisms**

The Plan recommends a combination of regulations, incentives and market investments in addition to vehicle efficiency improvements and reductions in VMT. We agree with a multi-faceted approach but would advocate a stronger emphasis on free market mechanisms. While we don't oppose well-designed incentives, we think the objective should be to ensure that incentives are structured to create a climate more conducive to private investment over the long-term. Please note the section at the end of our comments where we have a more detailed dialogue on incentives.

In the Government Actions section we don't understand the basis for the agencies estimated \$2 billion need for government incentives between 2008 and 2022 leading to a projected \$40 billion in private investment. The Plan also states between 2008 and 2050 about \$100 billion in total market investment will be required, however there does not appear to be a factual basis for these figures.

On pages 13-20, there is a very long list of actions to incentivize various alternative fuels. However, in Table 1, page 20, all the government incentives amount to only about 1/10 the total market investment that CEC/CARB forecasts is needed to provide these fuels. There is not any substantive discussion in the report of how all the government incentives would somehow bring about alternative fuel commerciality, or indicate any possible cost-effectiveness that would drive the huge market investments needed.

The Plan calls for "sustained or increased federal incentives, augmented by state incentives" in many areas of the report but in one area on page ES-9 it states these incentives may be needed to the extent market competition and market mechanisms do not fulfill this need. We recommend inserting the latter language in every area where incentives are discussed.

We recommend that the following statement on page ES-4 be repeated at the end of paragraph 2, ES-9,

"Achieving California's petroleum reduction and GHG goals will require development of new and emerging fuels, vehicle and fuel production technology advances, and manufacturing cost reductions of vehicles, engines and component parts."

On page ES-9 the report states California should support a Clean Alternative and Renewable Fuel, Vehicle and Advanced Technology Initiative, which advances the state's leadership on clean transportation technology. WSPA requests the details of the proposed Initiative, and where the funds would be derived from to pay for it.

In addition, the Plan includes a quote from a recent book by Terry Tamminen to the effect that the oil industry has benefited from ongoing and consistent financial incentives on the order of \$65 billion to \$113 billion per year. We question the relevancy of that quote to the Plan. Additionally, the statement is unsupported by third-party citation – we believe strongly that it should not be a part of the Plan.

### **Bio fuel Blends**

We agree with the statement in the Plan's conclusions that the use of blends, such as renewable diesel, biomass-to-liquids, and gas-to-liquids, can have significant short-term advantages. However, due to the many challenges facing some of the other fuels in the Plan, such as costly and limited feed stocks, and significant technology advancement, WSPA believes these blends may be useful on a longer-term basis as well. We also observe that the Plan indicates advanced bio fuels (e.g. butanol) are being developed because of their inherent low carbon foot print.

While fuels like butanol may be low carbon, they also have physical and chemical characteristics such as: capability for blending at higher concentrations than ethanol (up to 16% by volume); maintaining compatibility with current car fleet; higher energy density and therefore closer fuel economy performance to gasoline on a volume basis; lower RVP and subsequent gasoline blending advantages (nonlinear reduction of RVP when co-blended with ethanol); and, lower solubility with water and thus improved transport characteristics (pipeline), that make their use superior to current renewable fuels .

### **New Infrastructure**

The Plan states that California will need 30 to 60 new bio fuels production plants and and/or will need installation of 2,000 bio fuel fueling stations to reach its goals. This is an enormous number of facilities, and the plan does not address whether this is feasible based on significant CEQA and other challenges such as:

- where the feed stocks will be coming from for the plants;
- how bio-feed stock collection infrastructure will be established and whether this will require subsidization; and,
- the economic viability of those feed stocks.

Given that the Plan expects a significant reduction in petroleum use it would seem reasonable to discuss how the existing petroleum infrastructure might be utilized.

### **Costs**

The first sentence says, "Except for ethanol and hydrogen, all other alternative fuels are less costly today than gasoline and diesel on a fuel use, cents per mile basis." This statement doesn't seem to agree with various Scenario Analysis Papers. Bio diesel, for example, was estimated to need an incentive to equal diesel costs. Staff needs to clearly define whether they are including existing subsidies or not and provide data to substantiate this statement.

The Consumer Payback Period Figure 16 seems flawed in principle. The Figure implies that the alternative fueled options fuel prices are not impacted by crude oil prices. As indicated in CEC reports, there is over 20 years of evidence that shows crude oil and natural gas prices are linked in the market. There is no basis to assume a single RFG price point with a unique, absolute, long-term alternative fuel price.

### **Inclusion of XTLs**

We believe XTLs deserve better treatment in the Plan. It is not clear what methodology was used to determine the "optimal alternative fuels mixes". This "optimal" terminology seems to be at odds with other statements in the Plan that government is not in the business of picking winners.

The document states that while XTLs offer attractive alternative feed stocks, they suffer from cost barriers and limited environmental potential. WSPA believes XTLs may have just as much potential as the other alternative fuels listed – which also suffer from many limitations. With over 3 billion gallons per year of capacity either already on-line or under construction, the characterization of "building pilot plants" especially for GTL is incorrect.

We request that XTLs be re-included in the Plan as a viable candidate. This will help ensure that Plan outcomes are achieved, and that specific actions for XTLs are listed for immediate and mid-terms.

On pages 4-5 the Plan states, "The Plan must be responsive to all fuel and vehicle options. Given the enormity of the task of transitioning from gasoline and diesel fuels, the state cannot afford to pick "winners." All reasonable non-petroleum fuel and vehicle options must be provided the opportunity to compete in the evolving transportation fuels market." We believe this reinforces the need to re-include XTLs, which at the moment is cast in the report as a "loser."

### **Full Fuel Cycle Analysis**

As noted in WSPA's June 19, 2007 written comments and testimony at the June 27 Business meeting, we believe the FCA needs more work to become a valid analysis tool for the difficult policy decision making that must occur for the AB1007 Plan, as well as for the LCFS. Overall, the TIAX analysis continues to illustrate the uncertainty that exists in the fundamental tool for measuring carbon intensities of various fuels. Most experts agree there is no widely agreed upon FCA method for measuring all global warming impacts of transportation fuels.

Consistent with our earlier comments, we believe the above analysis is questionable as a valid tool for policy decision-making, and certainly for regulatory compliance. The FCA is a critical part of many current activities in the state – including the LCFS. We need to be able to feel confident that the model accurately reflects how different fuels will impact the state. This is currently not the case.

On page 25, potential land use impacts due to bio fuels production are minimized by claims that most land will be converted from the cultivation of other crops. If this is accurate, what will replace the lost food crop production? In fact, it has been proposed that set-aside land will be returned to cultivation, contrary to the statements in the report.

As stated before by WSPA, the current model is woefully inadequate in addressing land use (such as cropping patterns and fertilizer use) and water use impacts – two very important aspects that do not seem to be highlighted in the Plan. At a minimum these uncertainties need to be included in the Executive Summary and not left to a few sentences in the body of the report.

Many of these issues will continue to be worked under ARB's auspices as the LCA is addressed for the LCFS. WSPA looks forward to engaging in these discussions and bringing our expertise to the table. We hope there is a consensus agreement on the validity of a model before it is selected as a governing tool for analyses.

### **Recommended Government Actions**

The Plan lists three main measures for the Governor and Legislature. It is not adequately descriptive, however, of the second and third measures which are:

- "Evaluate existing tax structures to remove disincentives and reflect the relative public benefits of alternative fuels compared to gasoline and diesel; and,
- Recipients of state alternative fuel incentives should transfer to a Carbon Credit Fund all or part of any GHG emission credit received as a result of successful projects subsidized by state government incentives. These credits should be allowed for non-mandated, surplus, and early emission reduction measures."

WSPA requests more detail be provided on these concepts.

### **Cellulosic Ethanol**

The main technology/fuel featured in the report appears to be cellulosic ethanol. If that technology is not viable and cost effective by 2012, 2017, or 2022 and the state must use other renewable fuels, the Plan does not address where these are projected to come from and what the environmental and other impacts will likely be.

### **E85**

One of the sections, called "Actions Needed by Fuel Type" (Page 15 – Ethanol – Immediate Term Actions) says, "Facilitate automaker commitments to produce FFVs...This would be a sizeable portion of a total of 750,000 alternative fuel vehicles added per year for 5 years."

WSPA questions whether it is sound policy to focus on FFVs when it is unknown whether E85 will, in fact, become a major market fuel in the immediate future.

Similarly, we question the next action item which calls for expansion of the installation of E85 pumps in 2,000 stations over 10 years. There seems to be a disconnect between the Plan and the Transportation Energy Forecast report which has no reference regarding needed E85 volumes and import/supply infrastructure.

There are several current issues associated with E85 pump certification. WSPA suggests that any proposal to incentivize the installation of E85 pumps be contingent on the resolution of outstanding pump/infrastructure issues. On page 64 the E85 distribution infrastructure appears to be based on the costs associated with shifting from E5.7 to E10.

The actual investments required to upgrade to E85 pumps will not be known until the certification issue is resolved. But, in the meantime the E5.7-E10 related upgrading costs are an extremely poor proxy for the associated cost of E85 installations.

The report overlooks a more practical alternative for the expansion of bio fuels. On page 14, the report indicates that E85 is necessary to increase ethanol use beyond E10. However, the same flex fuel vehicles could operate on blends above E10 but much lower than E85, thus avoiding many of the E85 infrastructure problems cited. The exclusive focus on E85 carries over on Page 15, where the list of "Immediate Term" actions includes expansion of E85 infrastructure to accommodate dispensers at 2000 stations.

### **Biofuels Standards/Enforcement**

On Page 15 we suggest the following be added, "Address questions around the ARB and DMS fuel specifications for existing and emerging bio fuels (bio diesel, renewable diesel, ethanol, E85)." On many occasions at workshops, agency personnel have admitted there is a need to revise ethanol specifications for sulfur, that E85 specifications haven't been reviewed for many years, and that DMS's issuance of over 50 waivers to bio diesel producers needs to be re-examined.

In addition, this document does not touch on the need to develop enforcement mechanisms and labeling requirements that will allow refiners to get credit for co-processing of renewable feed stocks through their hydrotreaters.

### **Sustainability Challenges**

Sustainability challenges are associated with the widespread adoption of bio fuels in Europe and in Washington. We encourage the state of California to avoid reinventing the wheel and benefit from the sophisticated degree of thought that has been put into this issue already in Europe and in other parts of the US.

### **Incentives Comments**

#### **1) Incentives should reward based upon clearly defined performance metrics.**

Example metrics (not exclusive):

- Cost-effective GHG reduction;
- Scalability - Ability to materially impact the entire fuels system;
- Acceptable impacts on air quality/toxics etc; and,
- Enhance energy security.

The report states that the lack of consistent market signals has been an impediment to the success of alternative fuels in the market. However, it is unclear that the funding priorities set by the AB1007 report do a more effective and efficient job than previous policies to provide appropriate incentives to promising technologies that might offer long-term solutions to the challenges listed in the report.

The report also has not specified that the incentives have any connection with the ability of the fuel to deliver against the intended policy goals of California. As a result there is a possibility that funding will not be directed towards technologies that achieve those goals, and are capable of delivering the greatest GHG reduction (or offset of petroleum imports) efficiently. There is a distinct possibility that promising sustainable technologies will be sidelined to serve the current day technology that only marginally (but vocally) delivers on the policy goals of the state.

A fact-based transparent system to assess trade off between delivery of performance using one metric or another may help achieve the intended policy goals of California.

## **2) Proposed Incentives Do Not Create a Level Playing Field**

This plan claims that there are many current technologies that on a price per mile basis are already competitive with gasoline. Therefore, incentive programs would subsequently be focused on removing the infrastructure barrier to entry for many of these fuels.

With such reasoning, it's possible that government incentive programs would emerge to substantially subsidize the uneconomic construction of infrastructure for a range of technologies. Rewarding technologies that have substantially higher infrastructure costs with higher incentives may not achieve cost effective technology solutions.

## **3) Timeframe of incentives is too long**

If the stated goal is to remove the "barrier to entry" for new renewable fuels, incentives to enable investments in fuel production should have a sunset period that corresponds with well-documented investment decision-making timelines. Timeframes aligned with the payback period for a production plant or time it takes to repay the market-rate debt obligations for a particular plant may be appropriate, for example.

## **4) How not to encourage private sector investment**

By rewarding lower performing technologies that are not capable of quickly becoming competitive on an unsubsidized basis, the state may hinder investment in feasible and cost-effective technologies and continue dependence on state-funded incentives.