

**MTBE PHASE OUT
IN CALIFORNIA**

APPENDIX -- Stakeholder Comments

MARCH 2002
P600-02-008CR



CALIFORNIA ENERGY COMMISSION

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MTBE Phase Out in California

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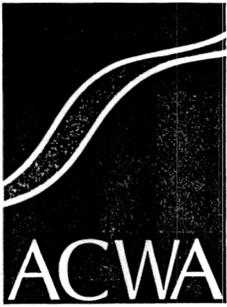
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March 8, 2002

The Honorable Gray Davis
Governor of California
State Capitol
Sacramento, CA 95814

Dear Governor Davis:

The Association of California Water Agencies (ACWA) respectfully urges you to stand firm on your 1999 Executive Order calling for a ban on MTBE in gasoline by December 31, 2002.

ACWA and its 438 public water agency members have been outspoken in our support for eliminating MTBE from California's gasoline. As the agencies responsible for more than 90% of the water delivered in the state, we applauded your decision three years ago to put the safety of our water supplies first by banning the use of MTBE by the end of 2002.

As you know, MTBE has had a serious and disturbing impact on California's groundwater and surface water sources. That impact includes:

Contamination and closure of dozens of drinking water wells. MTBE contamination or threat of contamination has forced the closure of wells in South Lake Tahoe, Santa Monica, San Jose, Sacramento, Cambria, Kern County and other locations.

- Millions of dollars in water treatment, cleanup and replacement water costs. These costs will continue to mount as long as MTBE remains in gasoline and is allowed to find its way into water sources.
- Loss of public confidence in the safety of our water supplies

It is patently obvious that MTBE is a threat to our state's water resources. It is an expensive problem that will only grow more expensive in the future, and it is costing us precious water supplies that California simply cannot afford to lose.

ACWA has strongly supported your efforts to obtain a waiver for California from the Clean Air Act's oxygenate requirement. We agree with your assessment that refiners can produce a clean-burning gasoline without the addition of any

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Water Agencies**

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oxygenates. From a water supplier's perspective, it is clear that fewer additives put into gasoline mean less opportunity for future contamination of our water sources.

It has been reported that concerns over distribution problems and potential gasoline price increases have led you to consider delaying the MTBE ban for an unknown period of time. ACWA firmly opposes any delay in removing this insidious contaminant from California's gas. Whatever small increase in gas prices that may result from the ban will pale in comparison to the tremendous cost the public will bear for ongoing cleanup of MTBE contamination and replacement of contaminated water supplies.

Gasoline refiners and distributors have had three years to plan for and accommodate the removal of MTBE by the end of 2002. During that time, MTBE has continued to further contaminate our state's water supply sources.

The situation unfolding right now in Ventura County is a case in point. Two distinct and separate MTBE plumes have been discovered within the past six months, impacting the City of Santa Paula and the United Water Conservation District (UWCD), both of which deliver drinking water to residents in that area. United has 12 wells that are threatened, and the City of Santa Paula has five threatened wells.

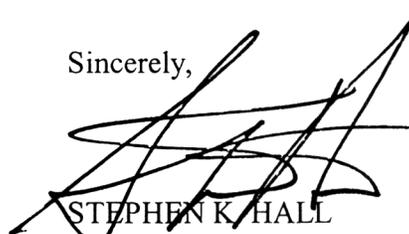
Although investigation of the plumes has not revealed when the releases occurred, at least one of the plumes appears to be recent and very possibly caused by a spill at a gasoline dispenser. While United Water Conservation District has managed to continue serving its customers by using extra supply wells and alternative surface supplies, the City of Santa Paula has no similar options and is forced to continue using its wells despite the MTBE plume located just 700 feet away.

As this recent example shows, delaying the ban on MTBE by even one more day is another opportunity for MTBE to find its way into another community's water supplies.

We believe that given the choice between continued MTBE use or protection of our water supplies, the public would put our water supply sources first – even if it means paying a little more at the pump for a short time.

We urge you to help us protect California's precious water supplies by keeping the December 31, 2002 deadline intact.

Sincerely,



STEPHEN K. HALL
Executive Director

cc: Senator Dianne Feinstein
Senator Barbara Boxer
Pat Perez, California Energy Commission
Winston Hickox, California Environmental Protection Agency
Christine Whitman, U.S. Environmental Protection Agency



February 25, 2002

The Honorable Gray Davis
State Capitol
Sacramento, CA 95814

RE: MTBE Phase Out in California/ Stillwater Associates study

Dear Governor Davis,

We are writing to urge you not to delay the MTBE ban. Bluewater Network has serious concerns about the economic and environmental impact of a delay.

First, we firmly believe that an across-the-board delay of the MTBE ban is unnecessary. At the February 19 California Energy Commission workshop to discuss the Stillwater Associates report on the MTBE phase-out, Stillwater staff and others stated that most California refiners are on track to meet the December 31, 2002 MTBE ban deadline. Delaying the ban will strand investments already made by refiners and the transportation infrastructure industry.

While we certainly do not want California to experience supply or price problems, we do not believe a ban extension is the answer to the possibility of unintended consequences of the MTBE ban. We believe a better solution would be temporary ban waivers for any refineries that experience legitimate difficulties. If a refiner can make a compelling case to the state that serious price increases will occur, or that ethanol or other supply problems will result if they remove MTBE by the deadline, a variance to allow continued MTBE use for a specific, limited time could be granted until the problems are solved. We believe this is a reasonable approach that would not jeopardize California's environment or economy.

Second, allowing continued MTBE use will unnecessarily endanger California's water resources and economy. A study by Lawrence Livermore National Laboratory estimated that there are already approximately 9,000 groundwater sites contaminated by MTBE in California. Cleanup costs for public water wells range from \$1,000,000 to \$11,000,000 per well (UC Davis reports the low estimate for cleanup of public water wells contaminated with MTBE at \$1,000,000 per well, while the California MTBE Research Partnership estimated \$11,000,000 per well, including capitol and operation and maintenance costs over a 30 year period.) Private well treatment is approximately \$35,000 per well for carbon filtration over 30 years.

Stillwater's analysis of the costs and benefits of the MTBE phase-out quantified potential fuel price increases, but completely ignored the costs of potential MTBE contamination with continued use. As stated above, costs for cleanup of MTBE contaminated water can run into the millions of dollars per well. California cannot afford to lose existing water supplies, let alone foot the bill for cleanup when contamination occurs.

Third, Stillwater's assumption that the state's expected petroleum supply deficit should be filled with MTBE is an inappropriate application of MTBE. As you know, California's demand for

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petroleum is rising every year, due to increasing vehicle miles traveled, population, and preferences for less fuel-efficient vehicles such as sport utility vehicles. Your administration, through the AB 2076 petroleum reduction program, is already investigating potential strategies to reduce this demand. Of all possible solutions, we believe continued use of MTBE, a known environmental hazard, would carry the most risk and the least long-term benefit, and should not be seriously considered.

Finally, we urge your administration to consider the environmental and economic benefits of blending more ethanol than the minimum 5.7 percent required to meet the Clean Air Act oxygen content requirement. Under California's current fuel regulations, it would be difficult for refiners to add more than the 5.7 percent ethanol required to meet the Clean Air Act oxygen requirement. However, if the predictive model is updated to reflect recent Automobile Alliance data showing reduced NOx emissions in new vehicles, ethanol could be blended into up to ten percent of California's gasoline. This would result in a net petroleum savings of five percent or more, completely eliminating the petroleum supply deficit predicted by Stillwater Associates.

Although refiners will need to eliminate some light ends in the refining streams in order to meet air quality regulations when adding ethanol, a ten percent ethanol blend will still result in a net fuel volume gain of at least five percent. Petroleum displacement would be greater than five percent if some refineries used the pentane light ends to make other products such as iso-octane.

Furthermore, use of ethanol to replace MTBE and to displace petroleum would provide the state with significant economic benefits if produced from in state from California's abundant biomass resources. A CEC report published in March 2001, "Costs and Benefits of a Biomass-to-Ethanol Production Industry in California," shows that even a modest state biomass ethanol industry, producing 200 million gallons per year, would result in statewide economic benefits of \$1 billion over a 20-year period. The December 1999 CEC report, "Evaluation of Biomass-to-Ethanol Fuel Potential in California," shows California has enough biomass resources to produce up to 3.9 billion gallons of ethanol per year. For these reasons, it makes sense to evaluate increased ethanol use as an important petroleum reduction strategy.

Thank you for the opportunity to comment. We strongly urge you to stay firm on your commitment to phase MTBE out of California's gasoline by the end of this year.

Sincerely,



Elisa Lynch
Campaign Director

Cc: Winston Hickox
Jim Boyd
Pat Perez

Pat Perez - MTBE Phase Out on Gasoline

From: "Acosta, Juan M" <Juan.Acosta@BNSF.com>
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Date: 2/22/02 3:05 PM
Subject: MTBE Phase Out on Gasoline

Pat

Attached are my comments on the workshop presentation. Please feel free to call me if you have any questions.

Thanks

Juan Acosta
Director, Government Affairs
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<<Letterhead.doc>>

BNSF



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The Honorable James D. Boyd
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

February 22, 2002

Re: Workshop on MTBE Phase-Out

Dear Commissioner Boyd

In response to your request for timely comment concerning the recent CEC MTBE workshop, I would like to offer the following observations concerning rail transportation issues. In recent months, representatives from BNSF have met several times with various officials from the CEC, CARB, and Cal EPA to discuss how BNSF's approach to moving ethanol from the Midwest to California can help meet California's ethanol supply requirements.

Transporting agricultural commodities, BNSF routinely runs large "unit trains" of 100 or more cars carrying the same commodity. Unit trains provide significant efficiencies (approximately 50 percent) over traditional service by eliminating many of the problems that lead to service failures in assembling and handling individual cars carrying commodities mixed with other types of freight cars. Moreover, the unit train approach, by allowing us to run what is essentially a shuttle service, makes our equipment usage and tracking much more efficient. For example, BNSF had a fleet of 35,000 grain cars in 1998 when we adopted the unit shuttle train innovation. BNSF has been able to pare that number down by 6,000 cars because of unit train efficiencies and our management program. Moreover, 5,500 cars now handle 80 percent of our grain freight using the unit train innovation.

Ethanol, like other commodities, can be transported to California in the same manner we currently transport grain (BNSF moves 10-to-12 unit trains of grain per week into the Central Valley to supply the feedstock used by ranchers here). BNSF has spent considerable time talking with large and small producers in the Midwest (approximately 90 percent of the aggregate production), as well as refiners about using BNSF unit trains to transport ethanol to California. The interest in using our service has been extremely positive -- both large and small producers are encouraged by our ability to serve the spectrum of producers, as well as our ability to access 95 percent of the Midwest ethanol production.

With just 4 unit trains each week, BNSF alone can transport enough ethanol into Southern California to satisfy the region's estimated need for ethanol. By comparison, BNSF currently runs 30-to-35 trains each day in and out of Southern California to service our intermodal freight customers whose containers flow in and out of the ports of Long Beach and Los Angeles.

Although the Stillwater report did not address rail transportation in any meaningful detail (ethanol supply into the state was apparently not part of the study's scope), during the hearing, CEC staff noted the unit train approach offered the most efficient method for supplying sufficient amounts of ethanol to California. While staff suggested the rail receiving facilities have yet to be constructed in Southern California, there was reference to a planned facility for a refiner in that region of the state that would satisfy this need.

The issue of railcar tank requirements for ethanol transportation was also discussed briefly. We have had discussions with railcar tank manufacturers concerning the need for additional tank cars and have been assured the leading manufacturer can easily supply an additional 1,000 new tank cars by Fall 2002. In addition, a significant number of tank cars currently used to transport other materials would likely be converted to use for ethanol transport. 7

The problem BNSF faces, like most other enterprises involved, is one of certainty, timing and asset allocation. While I appreciate the responsibility the Commission and other state agencies have in making a considered and informed decision in this matter, it has also been very difficult for many on the ethanol supply side of this discussion to make plans with any reasonable sense of certainty as to the outcome or timing. Fits and starts have characterized the course of this issue. Litigation, international trade disputes, federal and state agency deliberations have all played a hand in this. In turn, delays in decision-making have transformed critical asset allocation decisions into a dilemma for some.

We have remained flexible in our planning in an attempt to ensure the anxiety expressed by some over ethanol supply issues does not become something of a self-fulfilling prophecy and are confident in our ability to efficiently transport California's ethanol requirements, yet such delays run the risk of making it practically impossible for the supply side to work on a timely basis. While I am encouraged by reports the Governor expects to make a decision in 40 days, I cannot overstate how important it is to make a decision soon. I also note it is difficult to predict today how BNSF will allocate its assets and equipment three years from now. In the interim, other similar business opportunities may become the focus of our business plan. We urge the Commission and staff to retain the current schedule as much as possible with an extension that, if necessary, is of short duration (i.e., a few months) crafted to deal with specific facility planning and permitting issues. 3

A final observation -- in attending the workshop and reviewing the Stillwater report, it is apparent the issue is not ethanol supply, but gasoline formulation under the CARB III requirements. The Stillwater report and workshop discussion underscores the need to reevaluate the limitation on the amount of ethanol blended into gasoline. Data referenced by some attending the workshop would seem to suggest that increasing the ethanol blend to 10 percent would make up for any gasoline volume lost due to the MTBE ban while still achieving California's desired auto emission goals. 4

Thank you for this opportunity to provide comments. Should you or your staff have any questions, please feel free to contact me at 916-448-4086.

Sincerely,

Juan Acosta
Government Affairs Director

Cc Attached List

Copies:

**Susan Kennedy, Governor's Office
Secretary Winston H. Hickox, California EPA**

Pat Perez - Comments on Possible Impacts of MTBE phase out on Gasoline Supplies

From: <CalHodge@aol.com>
To: <pperez@energy.state.ca.us>
Date: 3/1/02 7:25 AM
Subject: Comments on Possible Impacts of MTBE phase out on Gasoline Supplies

Dear Pat:

I have attached comments concerning NOx increases associated with the use of ethanol will mail paper copies when I get back to the office.

When RFG was introduced ozone exceedances in areas using ethanol as the RFG oxygenate doubled while exceedances in areas using MTBE decreased. Data presented at CARB workshops indicate that the increased ozone may have been caused by the higher NOx and permeation losses associated with using ethanol in gasoline. The auto industry's allegations concerning ethanol's driveability and emissions increases associated with increased driveability index are consistent with the actual increases in ozone exceedances observed when RFG began in 1995. Data on new technology car emissions presented by the auto industry validates the predicted NOx increase in CARB's Phase 3 Predictive model. I have also shared some of my recollections on how the Federal Complex Model became NOx neutral. Therefore revisiting the Predictive Model is not justified.

If CARB does revisit the model, they will have to do more testing and a minimum one year ban delay will be required.

Because the real life increases in ozone exceedances make sense in light of the increased NOx, evaporative (due to permeation) and exhaust (due to driveability) emissions California should delay the MTBE ban indefinitely in order to prevent adding the risk of increased ozone exceedances to the Gasoline supply and price risks. Because the water actual water situation appears to be being managed, it does not seem prudent to take on these additional air quality and economic risks.

Cal Hodge

A 2ND OPINION, INC.

Comments on the Report:
"Impact of MTBE Phase Out"
By Stillwater Associates

Presented at the February 19, 2002
CEC Fuels and Transportation Commission Workshop

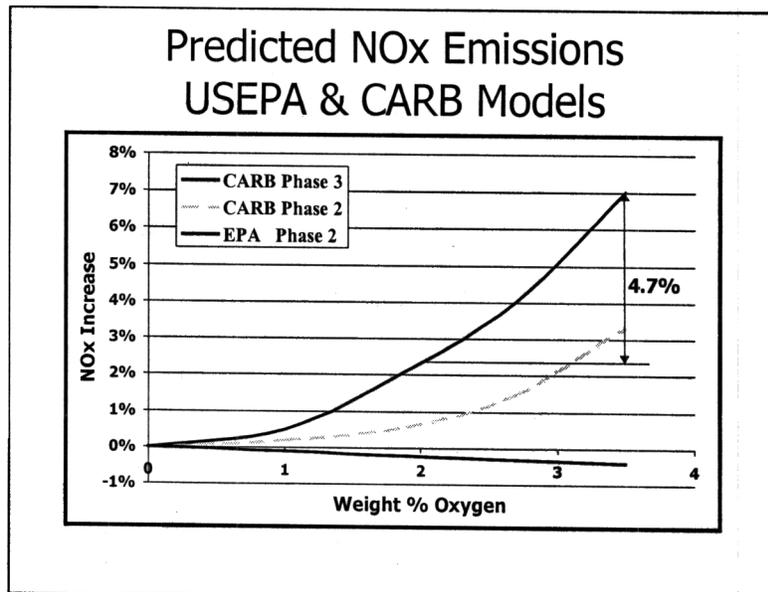
Revisiting the Predictive Model

While the Stillwater Associates' report focused upon the ability of the gasoline supply industry to produce and import the gasoline and blending components needed to meet California's gasoline demand after MTBE is phased out, several workshop participants made comments upon which I would like to comment.

Mr. Jim White of White Environmental Associates commented that the water contamination problems forecast by the University of California have not materialized. Mr. White commented that actual water contamination frequency data indicated that the underground storage tank repair and maintenance program was working. Therefore, it did not make sense that California should subject its citizens the risk of a gasoline supply shortage and the subsequent rise in gasoline prices projected by Stillwater Associates. I understand Mr. White will be filing comments on the issue. Therefore, I will not file additional comments on the actual tank situation. I will simply say that since the actual tank experience indicates that the water contamination appears to be being managed, California should not subject its citizens to the risk of gasoline lines and potential price increases that would cost the state of California much more than the water contamination. I will however comment on the request of several workshop participants to revisit the Predictive Model.

Some workshop participants were concerned that the predicted NOx increase in CARB's new Phase 3 Predictive Model is not correct. They felt that if the NOx increase was similar to that in the Federal Complex Model that gasoline blenders could use 10 percent ethanol and reduce the shortfall projected by Stillwater. Figure 1 compares the calculated NOx emissions from CARB Predictive Model and the Federal Complex Model. The increase in NOx emissions effectively blocks the use of ethanol at concentrations above 5.7 percent.

I attended the workshops in which the USEPA Complex Model was

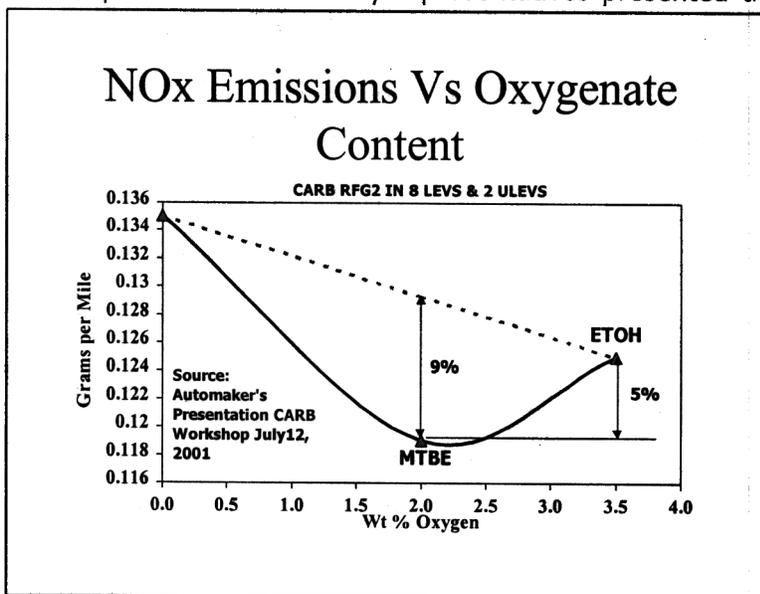


created. The Auto Oil emissions studies in the early 1990's showed that the NOx increase for 10 percent ethanol blends was statistically significant. The NOx increase for ether blends was not statistically significant. Some of the early regression runs of the Complex Model predicted that NOx emissions increased as oxygen content increased. In the workshop discussions the facts that oxygenates were required and that the NOx emissions increases for ethers were not statistically significant were used to justify adjusting the regression analysis to result in a NOx neutral model.

In a CARB July 12, 2001, workshop automobile industry representatives presented the NOx emissions data shown in Figure 2.

Note, the 5% increase in NOx emissions between the MTBE and ETOH blends is close to the 4.7% increase predicted by CARB's Phase 3 Predictive Model. Therefore, it is hard to justify redoing the model.

Also, because there is no ethanol NOx emissions data at 2 wt% oxygen, we simply do not know if ethanol at 2 wt% oxygen will reduce NOx emissions 12% like MTBE does or only 3% like it would if the NOx response were proportional to ethanol content. If the Predictive Model were revisited to change the NOx prediction, ethanol NOx emissions data at 2 wt% oxygen would have to be measured. This would take about one year. Thus the minimum delay in the MTBE ban if the Predictive Model were revisited would be one year. Even if the reexamination resulted in a revised model, the auto industry data indicates that NOx emissions would be greater than those experienced with MTBE.



If any of the California airsheds are NOx limited, switching to ethanol from MTBE could actually increase ozone exceedances. I am concerned about this because I sorted ozone exceedance data by type of fuel used several years ago and calculated the percent change in exceedances between 1993-1994 and 1995-1996. I found that when the nation switched from conventional gasoline to reformulated gasoline under the Simple Model that ozone exceedances doubled in areas that used ethanol as the oxygenate and that they decreased in areas that used MTBE as the oxygenate. Under the Simple Model refiners made reformulated gasoline by simply lowering the benzene content and RVP of the gasoline while adding either 10 % ethanol or 11% MTBE. The main difference between the Chicago/Milwaukee reformulated gasoline and other reformulated gasoline was the oxygenate chosen. The 25 to 50% increase in ozone exceedances for the conventional gasoline areas in which gasoline did not have to change significantly can be attributed to weather changes that apparently outweighed advances in car technology and stationary sources. The 15 to 25% reduction in ozone

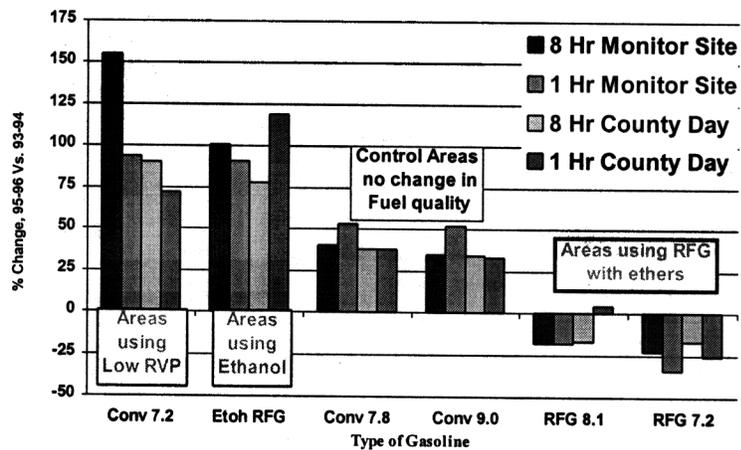
exceedances in areas that used reformulated gasoline containing MTBE is an indication that reformulated gasoline that contains MTBE is effective in reducing ozone exceedances. The increase in the areas using ethanol raises concerns about ethanol's effectiveness. I am concerned that if California switches from MTBE to ethanol, that ozone exceedances will increase like they did in Chicago and Milwaukee between 1993-1994 and 1995-1996 as shown in Figure 3.

I could not explain this data using the Complex Model. But, when I saw the NOx emissions data that the automobile industry provided in the July 12, 2001, CARB workshop I saw some justification for the increased exceedances.

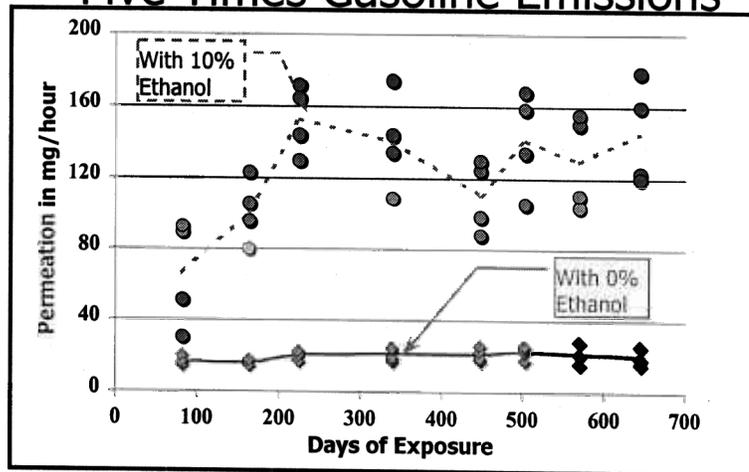
Permeation data presented by Harold Haskell &

Associates at that same meeting also helps explain why the cities using ethanol may have had the large increase in ozone exceedances. Figure 4 contains that data. This

RFG Effective in Cities Using Ethers Ethanol & Low RVP Fail



Gasohol Permeation Emissions Five Times Gasoline Emissions



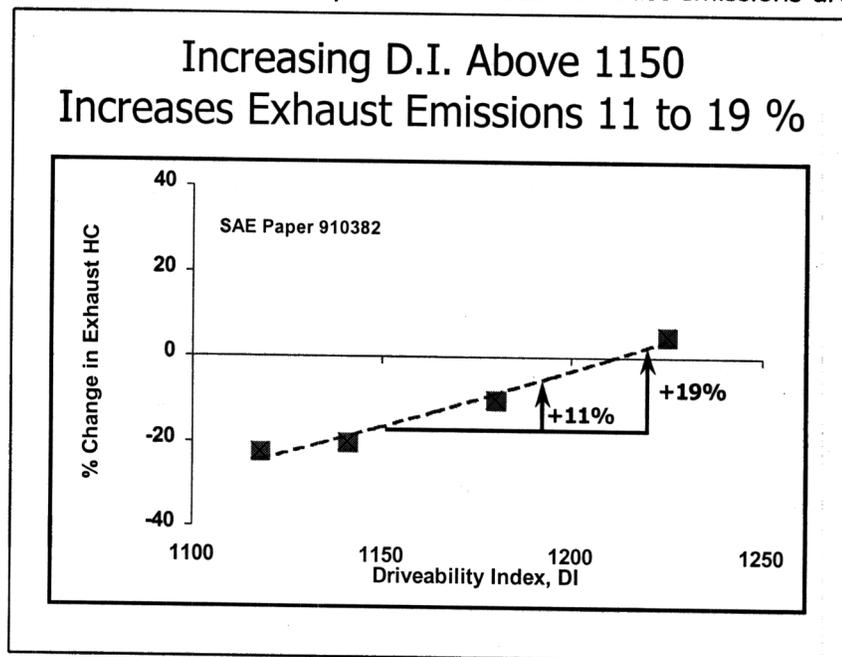
Source HH&A,
CARB Workshop

timing of the switch to ethanol based reformulated gasoline is consistent with high evaporative emissions during the 1995 ozone season.

data is interesting in that it has effects not captured in the emissions models. Because it takes about 200 days for the permeation losses to come to equilibrium the typical emissions test data cannot capture the impact of ethanol permeation through the various seals in automotive fuel systems. But, the

Another possible explanation is the automobile industry's allegation in their World Fuel Charter that gasoline containing 10% ethanol has a driveability index that is 70 points higher than that of gasoline containing only hydrocarbons or ethers. If we couple this claim with another automobile industry allegation that exhaust emissions increase as driveability index increases we find that ethanol blends could have exhaust emissions that are 11 to 19 % higher than ether hydrocarbon blends with the same distillation properties as illustrated in Figure 5. This is very serious because exhaust emissions are 3 times as likely to form ozone as evaporative emissions.

The potential for more NOx emissions, more evaporative emissions and more exhaust emissions may explain the increased ozone exceedances observed when the reformulated gasoline program began. Before they switch from MTBE to



ethanol California should determine if they want to risk air quality deterioration and higher gasoline prices or gasoline lines to resolve a water problem that actual data indicates may have been overestimated.

In light of evidence that ozone exceedances may increase if ethanol replaces MTBE California should consider delaying the switch to ethanol indefinitely. At a bare minimum the governor should delay the MTBE ban until further testing is completed or a Federal MTBE ban is enacted.

Pat Perez - Comments on Possible Impacts of MTBE phase out on Gasoline Supplies

From: <CalHodge@aol.com>
To: <pperez@energy.state.ca.us>
Date: 3/1/02 7:43 AM
Subject: Comments on Possible Impacts of MTBE phase out on Gasoline Supplies

Dear Pat:

I have attached comments concerning the Longhorn pipeline's ability to displace eastbound California Product and thus help relieve the California supply shortage projected by Stillwater. I will send you a paper copy Monday when I get back into the office.

I looked at Longhorn for another client about a year ago. When we consider the facts:

- o They have not started shipping and that more litigation is possible.
- o West Texas and New Mexico refinery capacity will probably be rationalized in light of the new lower cost supplies from the USGC and their upcoming desulfurization expenditures.
- o Regional demand growth is likely to absorb much of Longhorn's capacity.

Stillwater's projection that Longhorn will free up eastbound product for use in California by 2006 may be optimistic. The attachment provides a few more details.

If Longhorn supply is key, California should consider extending the MTBE ban beyond Stillwater's recommendation.

Cal Hodge

A 2ND OPINION, INC.
Comments on the Report:
"Impact of MTBE Phase Out"
By Stillwater Associates
Presented at the February 19, 2002
CEC Fuels and Transportation Commission Workshop

Longhorn Pipeline

We wish to comment on the Stillwater Associates assumption that the Longhorn pipeline will ease California's supply shortage by 2006. We understand from conversations with Longhorn personnel that the pipeline plans to begin filling in May 2002 and to actually begin shipping product in June 2002. This posture makes it appear that the Stillwater Associates assumption that the Arizona demand for gasoline from California will decrease 106,000 barrels per day (bpd) between 2005 and 2006 is reasonable. However, we would like to focus on the assumption that Longhorn will not significantly lower the Arizona demand for California product during 2003 through 2005. For reasons we will list shortly, we believe that it is a good assumption that Longhorn will not significantly reduce the Arizona demand for California product. These same circumstances may also extend into the 2006 and later time period and may make it prudent for California to consider and even longer delay of the MTBE ban implementation.

Startup date is still planned rather than actual

The startup date is still an assumption. It assumes that all litigation is settled or resolved. When dealing with multiple environmental activist groups, that is a significant assumption. Also, there is litigation pending concerning Longhorn's legal capacity to exclude gasoline containing MTBE from its customer base.

The startup capacity of Longhorn is 75,000 bpd. The maximum capacity is 225,000 bpd which can be achieved only after adding pump stations that are not due to be fully operational until 2010. The pipeline between El Paso and Tucson is now full. Product is being shipped via truck. Because the intra-Texas Longhorn expansions do not make sense until the pipeline to the west is available 125,000 bpd is a reasonable maximum capacity expectation for 2006. If this pipeline expansion experiences the same environmental opposition that Longhorn has experienced 125,000 bpd by 2006 will be very optimistic.

Regional refiner rationalization absorbs much of Longhorn's capacity

The initial flow of US Gulf Coast (USGC) product into the West Texas / New Mexico region will probably cause some regional refining capacity rationalization. These small relatively inefficient refineries are facing significant capital requirements in order to comply with the upcoming desulfurization requirements for both gasoline and diesel fuel. The availability of relatively low cost USGC product will make it difficult for these regional refiners to get financing for the desulfurization projects. Overall about 40,000 to 50,000 bpd local refiner production will probably disappear.

This will leave only 25,000 to 35,000 bpd of product to displace California supply and local demand growth. By 2006 only about 75,000 bpd of Longhorn product is likely to be available to push against California supply or meet local demand. When Longhorn reaches its maximum capacity, only 175,000 bpd will be available to meet local demand growth or displace California supply.

Local demand growth absorbs much of Longhorn's capacity

Local demand growth will absorb much of Longhorn's capacity. Arizona demand has been growing at over 10,000 bpd per year. Add in West Texas and New Mexico demand growth and

we find that 15,000 bpd per year will probably be used to supply local demand. The table below summarizes the projected balances:

Year	2002	2004	2006	2008	2010
Longhorn Capacity, bpd	37,500	75,000	125,000	175,000	225,000
Refinery Rationalization	-37,500	-45,000	-50,000	-50,000	-50,000
Local Demand	0	-30,000	-60,000	-90,000	-120,000
Available to displace Ca Supply	0	0	15,000	35,000	55,000

Conclusion

Stillwater is probably correct that Longhorn will not significantly contribute to displacing product supplied to Arizona from California until 2006. The Stillwater volume available to displace California product however is probably optimistic. Therefore, California should consider delaying the MTBE ban more than 3 years recommended by Stillwater Associates.

California Biofuels Development Group, LLC

March 1, 2002

California Energy Commission
1516 Ninth Street, MS 23
Sacramento, CA 95814

Attention: Mr. Pat Perez: via e-mail

Re: MTBE Phase-Out – “Stillwater Associates” Report Comments

Over the past two years, the California Biofuels Development Group, LLC has been involved in the feasibility of ethanol production in California and the development of a 20-million gallon per year fuel ethanol production facility in Yolo County, California to meet the new demand for ethanol in the state. The project is a grassroots state-of-the art facility that will require approximately 210,000 tons of corn per year and use the dry-mill process technologies and equipment to produce ethanol for the California fuels market and distiller’s feed grains for the state dairy and cattle industry.

The project will not only supply California with a clean burning renewable fuel and provide economic development for the local area, but also to be a catalyst to develop and sustain an in-state ethanol industry. The project will initiate the grain-to-ethanol concept in California and provide value-added benefits to the state’s agriculture industry, encouraging other regional ethanol production facilities. In addition, the project will facilitate the development of cellulose-to-ethanol technologies by providing a full-scale operating plant to the technology developers for demonstrating the use of agricultural waste materials, forestry thinnings and residues, and municipal solid wastes once the cellulose technologies are available for commercialization.

We have completed preliminary engineering design, permitting, and site selection and are currently finalizing funding for the construction of the ethanol facility. Maintaining the current deadline for phasing out MTBE is critical to secure funding for the project and commence construction of the first major ethanol facility in the state. We urge you not to move the deadline for phasing out MTBE. Extending the deadline will substantially delay the development of the project and prohibit us from moving forward with construction of the facility. Substantial effort and cost has been invested not only by California Biofuels Development Group, LLC but also the Yolo County Ethanol Task Force, Yolo County Farm Bureau, the ethanol and petroleum industries and many other agencies and companies to meet the current MTBE deadline.

Sincerely,

CALIFORNIA BIOFUELS DEVELOPMENT GROUP, LLC

Phil Cherry
Chief Operating Officer

California Renewable Fuels Partnership

1260 Lake Blvd – Suite 225

Davis Ca 95616

530-750-3017

Comments re Stillwater Report:
3/1/02

The California Renewable Fuels Partnership would like to make the following comments to re the draft Stillwater draft report.

Impact on Local California Ethanol Production Opportunities:

Delaying the MTBE Phase out will have severe consequences on local production: Currently there at least eight projects in California in development and planning phase to produce over 240 million gallons. These projects will contribute over 500 million dollars in direct economic development plus additional on going economic benefits to local farmers and communities. Delaying the MTBE ban will create an atmosphere of uncertainty that will effectively squelch investment appetite for these projects. This consequence of a MTBE extension cannot be over looked and needs to be addressed in any solution.

In State Producer Incentive Imperative for Local Production:

Last year the CEC provided an analysis on the return to the state for a producer incentive for local production. This study showed a billion dollar return for an investment of 500 million dollars. Such a program is essential to insure that an instate ethanol industry is built in California. California has a desire to not be dependent on out of state sources of ethanol. Recommending a producer incentive program is critical to the fulfillment of that goal.

New specification for ethanol fuels needed:

The Stillwater report did not examine increased uses of ethanol. Increasing the ethanol in the gasoline to 7.7% or 10% will increase the fuel supply and address much if not the entire perceived shortfall. In order to accomplish this a new specification that is maximized for ethanol should be adopted by the ARB. CRFG3 regulations and predictive model could stay the same giving refiners the option of using the current predictive model or using a new specification tailored to ethanol's unique blending and air quality characteristics. Such a specification can giver refiners more flexibility to use greater amounts of ethanol when market conditions warrant, thus helping alleviate potential price spikes.



CALIFORNIA
STATE
UNIVERSITY
FRESNO

February 26, 2002

Mr. Pat Perez
California Energy Commission
1516 9th Street M/S 23
Sacramento, California 95814

Dear Mr. Perez:

I am writing in response to the *MTBE Phase Out in California* study conducted by Stillwater Associates for The California Energy Commission. There are four areas that require attention: 1) on p. 41 the issue is causality and supply versus demand side issues 2) p.14 the role of substitutes needs to be considered in the schematic for demand determinants, or "drivers" 3) p. 42 the numbers used in the elasticity of demand equation are not consistent with theory, or with the formula presented on page 41. 4) there is a math error on p. 42, the result of which is 1. an over-amplified demand effect 2. inconsistent with the authors' argument of inelasticity.

1) Causality

In section 5.1, the first paragraph explains price elasticity of demand. Price elasticity of demand measures a market's responsiveness to changes in price. The question that the authors seem to raise is how will a shortfall in gasoline production impact prices (P), consumption (quantity demanded, Q) and consumer expenditure (P*Q). Therefore, in the second sentence, a more accurate way to describe the price elasticity of demand is that a 20% increase in price will result in a 2% fall in demand. This is an important observation because it is a supply side impact, and a shift in the supply curve that will drive the price change of gasoline.

2) Determinants of Demand

In section 2.1 a model is presented to determine fuel demand. Although the authors address substitutes later in the study, their role needs to be addressed initially, and throughout the analysis. The availability of substitutes is an important part of determining the elasticity of demand for a good. For example, especially the Northern California markets have many substitutes readily available for transportation. These consumers are more flexible (price elastic) than, perhaps, their Southern California counterparts. Although the Southern market appears to be more strongly affected by the suggested shortfall, additional supplies made available in the Northern market would impact these effects. Therefore, especially when the elasticity of demand is such a strong part of the argument, substitutes should be considered throughout the analysis.

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THE CALIFORNIA STATE UNIVERSITY

3) Inconsistent Model Application

The authors present the formula Elasticity of Demand equals percentage change in quantity demanded divided by percentage change in price.

$$E_D = (\% \text{Change } Q) / (\% \text{Change } P).$$

However, on the top of page 42, their presentation suggests that they are using the formula

$$E_D = (\% \text{Change } \textit{Supply}) / (\% \text{Change } P).$$

They write that a 10% *shortfall*, a supply issue, caused prices to double, and apply the elasticity of demand formula to show a 100% increase in price, based on an elasticity of demand of 10%. Using the percentage change in supply, with the elasticity of demand does not give an accurate percentage change in price.

4) Math Error and Inconsistent Results

In Section 5.2, the authors explore long term effects, and consider the impact of a -.7 elasticity of demand, and a 20% price increase on quantity demanded. This implies

$$-.7 = (\% \text{Change } Q) / .2$$

Solving for the percentage change in quantity demanded, one gets -.14, or that quantity demanded will fall 14%, not 30%. Furthermore, if demand *did* fall 30%, this would suggest an *elastic* (more responsive) demand, rather than an inelastic demand as the authors argue, and assume by using an elasticity of demand measure that is less than one.

Thank you for your consideration of these comments. If you have questions, please do not hesitate to call me at 559-278-2831, or email me at eburnes@csufresno.edu.

Respectfully,



Ellen I. Burnes, Ph.D.

CAMBRIA COMMUNITY SERVICES DISTRICT**DIRECTORS:**

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GREG FITZGERALD, Vice President
ILAN FUNKE-BILLU
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Pat Perez, Manager
Transportation Fuel Supply & Demand Office
California Energy Commission
Transportation Energy Division
1516 Ninth Street, MS-29
Sacramento, CA 95814

VIA FACSIMILE: 916-654-4705

Dear Mr. Perez,

The Community of Cambria is aware that you are making a recommendation to the Governor on the future of the MTBE current deadline of Dec 31, 2002. We urge you in the strongest possible terms to keep the current deadline of Dec 31, 2002. Any extension would be a reckless recommendation putting our precious and scarce water resources severely at risk.

As you are no doubt aware, Cambria has been victimized by one of the most significant MTBE site contamination events in the State. We continue to defend ourselves against the impacts of this situation, at great cost. We can only urge, in the strongest terms, that this risk be eliminated for other communities.

California should not put our water resources at risk just to keep our gasoline prices low.

We appreciate your immediate attention to this urgent matter.

Sincerely,

Vern Hamilton, Interim General Manager

CC:

Susan Kennedy, Office of the Governor
Secretary Winston Hickox, California Environmental Protection Agency
Secretary William J. Lyons, Jr., California Department of Food and Agriculture

TOTAL P.02

From: "Christine Stackpole" <cstackpole@CERA.com>
To: <publicaccess@energy.state.ca.us>
Date: 2/19/02 12:23PM
Subject: MTBE Question

Hello,
I have several questions. Thank you in advance for your time.

*C. Impact
of MTBE
phase
out*

My first question lies in the areas of supply and impact of the MTBE ban: Can you comment on the actions taken to date within the Californian downstream industry to prepare for the phase out? You alluded to one major refinery investment plan - what is the status of this and what is the status of any terminal conversions to begin accepting ethanol?

C. "

My next question also relates to the impact of MTBE phase out: the consultants mentioned that about 110,000 bd of ethanol is currently being used in CA. Where is that being used and why is it currently economic to blend some ethanol if there is excess MTBE available?

E. Barriers

Barriers: is the challenge presented of storage capacity one primarily of added costs that the industry will have to incur or one of time needed to add the necessary storage? how significant is the costs of adding new tankage?

Christine M. Stackpole
617.441.2675

Associate Director
Downstream Oil
Cambridge Energy Research Associates
<http://www.cera.com/>

March 1, 2002

California Energy Commission
Attention: Pat Perez
1516 Ninth Street, MS 23
Sacramento, CA 95814

Re: Possible impacts of MTBE phaseout on gasoline supplies

Dear Mr. Perez:

Cargill, Incorporated is a 137-year-old firm headquartered in Minneapolis. Cargill's primary businesses involve the marketing and processing of agricultural commodities. Our California operations employ more than 800 employees in 18 communities. We have been involved in the corn wet-milling industry since the 1960s and rank fourth in size among U.S. producers of ethanol. This letter is being submitted in response to the request for comments by the California Energy Commission regarding an extension of the deadline for phasing out the use of methyl tertiary butyl ether (MTBE) as a gasoline additive.

Cargill supports maintaining the MTBE phaseout date of Dec. 31, 2002 that has been established by Gov. Gray Davis. We believe that – absent a change in policy – the fuel system will be ready by then to satisfy fully at a reasonable price the demand for gasoline meeting all CBG 3 regulations. Significant investments have been made by ethanol producers, terminal and transportation companies and petroleum refiners to comply with that deadline. Any delay in phasing out MTBE would have the effect of penalizing firms that have invested in good faith to meet a government requirement designed to improve environmental quality. A postponement of the phaseout also would reward firms that have delayed making the necessary investments to meet the requirements of Executive Order D-5-99. It would be unconscionable to change government policy in a way that leads to such inequitable results.

Although we believe a delay in the phaseout of MTBE is unwarranted and should be opposed, it is possible to envision the political process leading to such an outcome. In that case, the government of California would have an obligation to take steps to ameliorate the damage that would be done to firms that have invested to accommodate oxygenates other than MTBE. Those firms would find themselves disadvantaged in the marketplace because they would have to compete against firms with lower costs.

One alternative would be to maintain the phase-out date, but allow a special exemption for firms that simply aren't able to comply. Those firms could continue marketing gasoline containing MTBE for a limited time in exchange for paying a penalty of several cents per gallon. This approach would help to ensure that spot shortages of gasoline do not develop, thus preventing any disruptions to California's supply of motor fuel.

Another alternative would be to delay the MTBE phaseout for some period, but adjust California's gasoline excise tax to create a differential between the rate that applies to fuel containing MTBE and fuel that does not. A substantial number of gasoline marketers would be encouraged to switch to non-MTBE fuel, if the excise tax rate for fuel not containing MTBE is several cents per gallon lower than the rate applied to fuel with MTBE. The tax differential should remain in effect until the state finally ends the use of MTBE. This approach should be relatively equitable to stakeholders that have invested to comply with executive order D-5-99 because it would encourage a transition to non-MTBE fuels without actually mandating their use. It would provide flexibility to refiners while reducing, at least in part, the potential risk to water supplies from MTBE contamination.

Although it would not provide immediate relief for California's motor fuel concerns, Cargill also endorses reviewing the predictive model to incorporate new data developed by the Association of Automobile Manufacturers regarding the performance of Tech 5 vehicles. Revising the model to allow 10-percent ethanol blends would give refiners more flexibility while mitigating the volume loss due to the removal of MTBE. It also would allow the inclusion of more pentanes in gasoline, thus increasing the volume of fuel available within California.

We regret that time constraints prevent us from providing a more comprehensive review of the study done by Stillwater Associates. We would be pleased to work in greater depth with the California Energy Commission in the future and we appreciate your consideration of the views expressed above.

Sincerely,

F. Terry Jaffoni
Assistant Vice President
Director, Cargill Ethanol
952-742-5891

Pat Perez - 2/19 Workshop comments

From: "Michael J. Greene" <cdsconsulting@attbi.com>
To: Pat Perez <pperez@energy.state.ca.us>
Date: 2/22/02 3:02 PM
Subject: 2/19 Workshop comments

Pat Perez
CEC

re: 2/19 CEC Fuels and Transportation Committee Workshop on the Possible Impacts of MTBE Phase-Out on Gasoline Supplies

Pat;

I participated in the 2/19 Workshop on the Stillwater Report, which predicts gasoline volume shortages through 2005 if MTBE is phased out this year as directed by the Governor in 1999. I made several ethanol related comments on the Report and want to associate mine with the other ethanol related comments given during the Workshop Q&A.

For example, Steve Shaffer commented that the Predictive Model used by CARB does not include up to date information showing that greater amounts of oxygenates than now permitted in RFG3 (2% oxygenate/5.7% volume) would result in greater reductions in NOX.

As I understand this, updating the Predictive Model to include this new information could permit the blending of more ethanol with California gasoline (3.5% oxygenate/10% volume) and doing so would reduce the likelihood of the gasoline shortages predicted by the Stillwater Report if MTBE is phased out this year .

Based on this understanding and my belief that ethanol can help California solve MTBE and other problems, I respectfully request the Committee and Commission to press for the speedy updating of CARB's Predictive Model.

Thank you.

Michael Greene
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T 916-736-1572
F 916-736-1573
cdsconsulting@attbi.com

March 1, 2002

California Energy Commission
Attn: Pat Perez
1516 Ninth Street, MS 23
Sacramento, CA 95814
Via e-mail to pperez@energy.state.ca.us

Re: Possible Impacts of MTBE Phase-Out on Gasoline Supplies

Dear Mr. Perez:

ChevronTexaco is pleased to offer the following comments in response to CEC's request for stakeholder input following their February 19 workshop on MTBE Phase-Out.

ChevronTexaco supports the Governor's decision to phase out MTBE from California gasoline effective December 31, 2002, and we are taking all steps necessary to comply.

For this reason, we are concerned that the Energy Commission appears to be rushing to judgement on a recommendation that the Governor delay MTBE phase-out, based on the results of a study carried out by Stillwater and Associates. These results were first shared with our industry at a meeting of the Western State's Petroleum Association on February 8th. At that meeting, Stillwater and Associates used their analysis of future gasoline supply and demand to argue in favor of a California Strategic Fuels Reserve, a study mandated by the legislature with a clear delivery date. This was followed quickly by the February 19 workshop where Stillwater and Associates used the same results to support their recommendation that California should delay MTBE phase-out for 3 years. As best we can tell, the Commission seems to be moving rapidly towards making its own recommendation on the MTBE phase-out date by mid-March, though without mandate. We do not see the need for the CEC to move so quickly on the MTBE issue that stakeholder input is not given adequate consideration.

The schedule allows little time for stakeholders who we think would be interested--such as California residents, state and local water authorities, the environmental community, or the petroleum and ethanol industries--to absorb and comment meaningfully on the conclusions reached by Stillwater and Associates. What makes this hurried schedule particularly difficult is the very complex and multi-faceted nature of the topic. Not allowing sufficient time for stakeholder input is also uncharacteristic of the Energy Commission, which in our experience, has always taken pains to involve key stakeholders early and often in its deliberations. This new approach is especially troubling because we feel several key assumptions in the Stillwater and Associates report are questionable, and merit further discussion, study, and analysis. We are particularly troubled because the recommendation to delay the MTBE phase-out is not well supported by the rationale offered.

Comments on cost projections

The media have seized on the contractor-estimated costs of not postponing the MTBE phase-out. We have concerns that the contractor's cost estimate for maintaining the current deadline is grossly overestimated and that the contractor's cost estimate for postponement are, because they are assumed to be zero, equally under-estimated. The people of the state are being told a decidedly one-sided and thus misleading story.

Because of the potential to mislead the public, the contractor's study of the costs of price spikes needs particular scrutiny. The projected cost of price spikes alone seems high. How was the computation made? Were the cost reductions that result from price depressions that oftentimes follow such spikes due to market over-reaction credited against the projected cost associated with the spike? Is it valid to use market reaction to a sudden unexpected shortage as an analog to a situation where a potential shortage is well-publicized? Is there really anything the state can do that would reduce price spikes to zero? And if so, should the state take such action given that higher prices are what stimulate market response? The contractor should address these issues, at a minimum. And on the cost of postponement side, the contractor needs to consider the costs of the investments already made to comply with the phase-out and the undoubtedly higher costs of compliance activities that will have to be re-initiated and resumed in the future, in what arguably will be an even more difficult regulatory climate than we have today.

Comments regarding the report's conclusions on imports

Stillwater and Associates project that California cannot import sufficient CARBOB or gasoline blending components to meet the demand for Phase 3 gasoline in 2003. They argue that Gulf Coast refiners are not investing to produce CARBOB, and have no plans to do so; they also argue that Gulf Coast supplies of premium blend components already have a market elsewhere in the United States. They found only one foreign refiner capable of manufacturing CARBOB (Irving Oil in Canada). Their work also finds that shipping resources are too limited to transport the necessary cargoes to California, and that port facilities to receive imports are inadequate, particularly in the South Coast. They conclude that Phase 3 gasoline will cost consumers an additional 20-30 cpg under steady state conditions, with occasional shortages of 5-10% likely to increase gasoline prices by 50- 100% (whether those increases were projected to come at the wholesale or retail level was not clear).

These projections cannot be taken lightly. Stillwater and Associates is generally familiar with the industry, and they talked with many industry representatives before making their projections. However, we believe these results should have been expected, and that one must be very careful not to over-interpret their significance. Otherwise, they can be misleading. One does not expect to find excess capacity in an efficient market. Neither does one expect to find domestic nor foreign refiners making plans to fill a supply gap that they do not know will ever materialize.

Unfortunately, neither Stillwater and Associates nor anyone else can predict exactly how the free market will respond to bridge any short-term or on-going supply gap. But, we can be

confident that it will. The free market has allowed the petroleum industry to supply adequate amounts of the cleanest fuels in the world to California consumers and we are confident that it will continue to do so.

In our view, the free market will not allow a California price differential of 20-30 cpg to be sustained. The market will find ways to take advantage of a much smaller differential. It has happened many times in the past, and it will happen again, despite the difficulties outlined by Stillwater and Associates. Refiners with no current plans to manufacture CARBOB will find they can blend significant amounts profitably by “cherry picking” among their most suitable blend components. Ways will be found around the transportation and delivery difficulties. The free market needs to be credited with providing the excess quantities of CARB gasoline that were supplied to the market after each price spike that Stillwater documented, typically driving prices lower than what had been the average.

Comments regarding the report’s conclusions on the merits of delay

We agree with Stillwater and Associates’ position that it would be pointless to delay the phase-out just for the sake of delay. Their report recommends a 3-year delay, and provides a laundry list of things they expect will happen, or could be made to happen, over those three years that would make MTBE removal less problematic. While we have not had time to analyze each of the many changes that Stillwater and Associates believes will or could occur prior to 2005 that might make MTBE phase-out go more smoothly, we have many questions about the feasibility of some of the more critical ones.

We believe that, if anything, the environment in 2005 is likely be less conducive to a problem-free phase-out of MTBE than is the case today. We also suspect that few if any of the measures suggested in the contractor’s report will be instituted during the recommended three-year delay, in fact, given three more years several may move in just the opposite direction. Given that, we do not see the connection between the contractor’s recommended phase-out date and their rationale. The contractor should provide the missing nexus.

Federal sulfur regulations, affecting virtually all US refiners, will be phased in during 2004-2006. In our view, Californians will not be well-served if the state superimposes its MTBE phase-out simultaneously with these federal changes, which will preoccupy refiners in other states who might otherwise be able to supply blend stocks. Further, it is entirely possible that the federal government may have instituted a nationwide MTBE phase-out requirement and a renewables requirement that could take effect in much the same timeframe. That would jeopardize both blendstock and ethanol availability, and could create substantial problems for MTBE phase-out in California. We think California would be far better served by being the first to the party. The contractor should examine the added costs to California consumers of a bidding war over ethanol created by the proposed federal renewables mandate. It is over the latter concern that ChevronTexaco supports the Governor’s request to delay the onset of the potential federal renewables mandate for several years and not for any of the reasons Stillwater and Associates uses to defend a delay in the state’s MTBE ban.

The Stillwater and Associates report suggests that California supply will be augmented substantially in 2005-2006, because the Longhorn pipeline – expected to deliver product to the El Paso area later this year – can be extended to supply 100,000 BPD to Arizona by that date. We believe it unlikely that this can be accomplished given the myriad of issues that would have to be resolved, local area by local area. Also, the contractor's report is internally inconsistent over where those barrels will come from, given their conclusion that the Gulf refineries are assumed to have no excess to supply California.

The report also suggests that the availability of supplies from foreign sources can be increased dramatically by 2005, because foreign refiners will have time to justify projects, and time to make necessary modifications. But why would they do that? How can they justify projects to supply a demand they have no reason to be assured will exist? And why would they believe California is serious about 2005 if it has already delayed Phase 3 gasoline by three years?

Stillwater and Associates also suggest that many of the infrastructure problems they identify in their report can be fixed during a three-year delay. They feel the state can resolve local permit restrictions and NIMBY delays, and that new storage facilities will be built under long-term contracts. We contend that local permitting and NIMBY issues cannot be resolved by the state over any foreseeable period of time. The political issues are much too involved. It is true that the state was able to skirt some local environmental issues to permit new electricity generation capacity, but the alternative presented to Californians was no lights, no heat, no job, and no TV. The Governor is not likely to interfere in these issues based on a speculative projection. MTBE phase-out is in no way analogous to the very real public concern the electricity crisis was.

We also believe that the free market is unlikely to add capacity of any kind, manufacturing or storage, well ahead of perceived need. And this would be especially true if the state should delay the scheduled MTBE phase-out date in so doing demonstrating that there is no certainty in their regulations. The state could add storage via a Strategic Fuels Reserve, if it chooses to do so, although the value received is open to question as is the timing. Such a reserve would be subject to all the same state, federal, and local processes that the contractor identified as impediments to MTBE phase-out.

Markets and the impact of delay

We see a fundamental flaw in the contractor's logic. If, as they contend, the market will not be served in the face of an immediate regulatory requirement, how would it be better served by a delay in that requirement? A change in a regulatory requirement only introduces yet more uncertainty into the compliance plans of the regulated community. How would that community know that the next deadline would not also be extended for much the same reason the current one is under such consideration? The contractor should be challenged to show why the regulated community would not simply shelve all plans for compliance until just the same amount of time remains before the compliance deadline as we now have. They should show why financing for infrastructure investments would not simply dry up in the face of delay for the period of the delay putting the state of compliance in the same position in 2005

as it is today. In sum, the contractor should show why a delay would not simply postpone--for the period of the delay--all the problems they perceive happening now.

Another fundamental flaw is the lack of faith in the open market to solve the perceived problems. In every case of shortage in California, the free market has produced a solution, oftentimes accompanied by a price change that benefited consumers. We recall similar discomfort over what some predicted would be supply shortages when the CARB Phase 2 requirements were implemented in 1996. Undeniably there have been cases where prices have spiked in California when supply has been unexpectedly short. But it is equally true that the market stabilized, oftentimes very quickly, after the market signals caused imports to arrive in the state from unexpected sources. We see no reason why the same situation would not repeat itself.

Recommendation

We believe Stillwater and Associates did a good job of data collection and review. In fact, we have learned a lot from their study, and we are grateful to the Commission for initiating it. The problem comes when one tries to use the results to jump to the conclusion that MTBE phase-out should be delayed, and, moreover, to a specific date. We urge the Commission to slow down the current schedule, examine the issues we raise here, take time to hear from the various stakeholders, and institute meaningful dialog with those stakeholders, who we feel have been absent to this point. Only in this way can the Commission arrive at a fully considered decision concerning what is best for the state.

CITY OF LOYALTON

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OFFICE OF THE MAYOR

February 21, 2002

California Energy Commission
1516 Ninth Street, MS 23
Sacramento, CA 95814

Attention: Debbie Jones for Pat Perez; via fax (916) 654-4676

Re: MTBE Phase-Out- "Stillwater Associates" Report Comments

I am concerned that extending the use of MTBE will have significant environmental impacts on California's water systems. Northern California is the source of the drinking water supplies for most of the state. At the very least, I need your support in maintaining our water quality by ensuring that the gasoline supply of this area is MTBE-free.

I also support the development of the ethanol industry in California. In-state ethanol production can and will increase supplies in California with a clean renewable fuel source, create jobs, stimulate rural economies, return billions of dollars to the state's economy, while also providing for improved water quality, air quality, and forest health.

California agriculture is poised to rise to the challenge of the MYBE phase out by joining together and producing ethanol within the state. This is a great opportunity for California farmers and will provide value-added benefits to the state's agriculture industry, encouraging other regional ethanol production facilities that can utilize a diversity of feedstocks such as agricultural products and by-product materials, woody biomass derived from the wildfire fuels reduction and forest thinning practices, and municipal solid wastes.

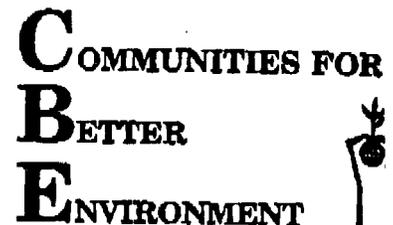
I urge you not to move the deadline for phasing out MTBE. Extending the current deadline will have a negative impact to our water systems, severely hamper the development of the ethanol industry in this state, and delay a much-needed economic boost to agricultural and forest based communities within our great state.

Sincerely,

Milton Gottardi
Mayor

February 27, 2002

The Honorable Gray Davis
State Capitol
Sacramento, CA 95814



RE: MTBE Phase Out in California/ Stillwater Associates study

Dear Governor Davis,

On behalf of Communities for a Better Environment (CBE), and our 20,000 members throughout California, I am writing to urge you not to delay the MTBE ban. Every day that MTBE remains in gasoline, it will continue to threaten California's most precious resource – its water.

Banning MTBE Protects California's Drinking Water: In 1999 you bravely decided to ban the gasoline additive known as MTBE, due to the threats the chemical posed to drinking water throughout the State. After detailed study by the University of California Davis and Lawrence Livermore Laboratories, it has been determined that MTBE has contaminated over 10,000 wells throughout the State of California. As you know, the City of Santa Monica has lost over half of its drinking water supplies, South Lake Tahoe, Santa Clara, Glenville, and other communities have all lost drinking water wells due to MTBE contamination. MTBE is dangerously close to drinking water supplies for Rialto, Fontana, Colton and Bloomington. Up to 5000 private drinking water wells have been contaminated with MTBE. In order to stop this growing catastrophe, you ordered a ban on MTBE by the end of year 2002 – giving the oil industry three years to make necessary adjustments.

Unfortunately, in the wake of a report by Stillwater Associates, you have proposed to give the oil industry another three years to phase out MTBE. CBE believes that such an extension is unwarranted, and would result in increasing MTBE contamination that could cost the state literally billions of dollars to clean-up. ①

Costs of Additional MTBE Contamination Exceed Costs of Phase-out: The Stillwater Associates report projects that an end-of 2002 MTBE ban would result in substantial gasoline price increases. CBE strongly disagrees with the methodology and conclusions used by Stillwater. However, even if the report is accepted at face-value, it fails entirely to consider the costs of additional MTBE contamination and clean-up. (Page. 49) By contrast, a study commissioned by the City of Santa Monica estimates that MTBE clean-up costs could exceed \$29 billion nationwide. Even the Stillwater Report projects that the MTBE ban would cost from \$1 to \$3 billion – a small fraction of the clean-up cost. Thus, delaying the MTBE ban would be short-sighted, perhaps saving money in the short-term, while costing the State billions in the long-term. ②

Stillwater Methodology and Conclusions are Erroneous, and the Report is Biased in Favor of the Oil Industry: The Stillwater Reports reads like an oil industry manifesto against all environmental regulation. This bias is clearly reflected from the acknowledgements page to the

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In Southern California: 5610 Pacific Blvd., Suite 203 • Huntington Park, CA 90255 • (800) 800-8888

conclusion. The report acknowledges an "industry stakeholder" process including "California refiners, representatives of the international trading community, independent marketers, trade associations, governmental organizations such as the State Lands Commission and Port Authorities." Glaringly absent from this list are any environmental organizations, authors of the Lawrence Livermore or UC Davis MTBE reports, environmental regulators, State or Regional Water Board representatives, renewable fuels industry representatives, or virtually anyone without substantial ties to the oil industry. (3)

Not only does the report criticize any MTBE phase-out, but is also criticizes virtually all environmental regulation related to the oil industry, from California clean fuel requirements, to the RECLAIM emission credit program (which was supported by the oil industry in the first place), to SCAQMD oil tanker emission regulations (Rule 1178), environmental permitting requirements which "hamper" refinery growth, and other regulations. Of course, California's environmental regulations, (which are largely responsible for the high quality of life in California), will be in place whether MTBE, ethanol, or some other product is used in gasoline. Thus, this discussion is entirely irrelevant. (4)

The basic premise of the report is that if MTBE, which is currently used at 11% of gasoline, is replaced with ethanol, at a blend rate of about 5.7%, the result will be a net reduction in supply of about 5%, or 50,000 barrels per day. The report somehow concludes that a 5% reduction in gasoline could result in a doubling of gasoline prices. However, this conclusion, which is itself highly questionable, is based on a false premise. Everywhere that ethanol is currently used, it is blended at a rate of 10%, including in Los Vegas, Phoenix, Chicago, Portland, and other locations. If the 10% blend rate is used rather than the 5.7% rate, then there is virtually no reduction in supply by the MTBE phase-out. Then, the only questions are whether there is adequate ethanol supply and the comparative prices of MTBE and ethanol. Currently, ethanol is cheaper than MTBE per gallon, especially when federal tax credits are factored in, and the report does not dispute that there is an adequate supply of ethanol. Thus, based on current per gallon prices of ethanol versus MTBE, one should expect a reduction in pump prices from an MTBE phase-out. (5)

The Stillwater Report has numerous other errors, such as assuming that California fuel usage will continue to grow at historic rates, despite the fact that the state is in a recession, and assuming that tank capacity that is currently used for MTBE cannot be converted to use for ethanol. In short, the Stillwater Report should be rejected by the CEC in its entirety, and a new consultant should be retained to conduct a neutral, objective analysis. CBE would suggest retaining experts from the University of California to ensure objectivity, and to require the contractors to conduct a true stakeholder process with a broad spectrum of interests, rather than including only oil industry representatives. (6)

New Storage Tanks Do Not Stop MTBE Leakage: While some contend that MTBE contamination is no longer a problem due to improved underground storage tanks that have been (7)

Comments of Communities for a Better Environment on
MTBE Phase-out and Stillwater Report
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installed, studies conducted by Santa Clara and Santa Ana Water Boards indicate that MTBE is so aggressive that it leaks out of even the new improved tanks. Thus, continued use of MTBE will mean continued leakage, and continued contamination of the State's soil and groundwater.

Legislation May be Necessary: If you intend to delay the MTBE ban, then it may be necessary to introduce legislation to ensure that an MTBE ban takes effect by the end of this year. As you know, CBE had co-sponsored legislation to ban MTBE at the time that you enacted your Executive Order to ban the product. While your Executive Order supplanted the legislation then under consideration, if you decide to delay the ban any further, it may be necessary to introduce legislation once again.

Thank you for the opportunity to comment. We strongly urge you to stay firm on your commitment to phase MTBE out of California's gasoline by the end of this year, and to reject the Stillwater Report.

Sincerely,



Richard Toshiyuki Drury
Legal Director

Cc: Winston Hickox, Cal. EPA
Pat Perez, CEC

COUNTY OF NEVADA

STATE OF CALIFORNIA

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BOARD OF SUPERVISORS

Peter Van Zant
Supervisor, 1st District
Resident Phone (530) 477-7639
E-mail peter@petervanzant.com

February 25, 2002

Pat Perez, Project Manager
California Energy Commission
1516 9th Street
Sacramento CA 958714

SUBJECT: MTBE Phase-Out Deadline

Dear Ms. Perez:

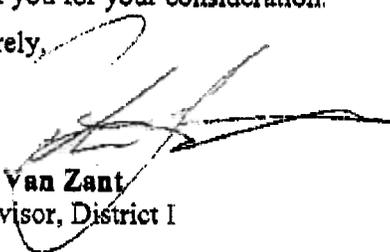
I am writing to urge you not to move the deadline for phasing out MTBE. Extending the current deadline will have a negative impact to our water systems, severely hamper the development of the ethanol industry in this state, and delay a much-needed economic boost to agricultural and forest based communities within our great state.

1. Extending the use of MTBE will have significant environmental impacts on California's water systems. Northern California is the source of the drinking water supplies for most of the state. Please support maintaining our water quality by ensuring that the gasoline supply of this area is MTBE-free. (1)
2. In-state ethanol production can and will supply California with a clean renewable fuel source, create jobs, stimulate rural economies, return billions of dollars to the state's economy, while also providing for improved water quality, air quality, and forest health. (2)
3. California agriculture is poised to take advantage of the MTBE phase-out by joining together and producing ethanol within the State. This is a great opportunity for California farmers, and will provide value-added benefits to the State's agriculture industry, encouraging other regional ethanol production facilities that can utilize a diversity of feedstocks such as agricultural products and by-product materials, woody biomass derived from the wildfire fuels reduction and forest thinning practices, and municipal solid wastes.

Please do not extend the MTBE phase-out deadline.

Thank you for your consideration.

Sincerely,


Peter Van Zant
Supervisor, District I

Pvz:pb
cc: SEDD

Pat Perez

County of Tulare



February 28, 2002

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Pat Perez, Manager
Transportation Fuel Supply & Demand Office
California Energy Commission
Transportation Energy Division
1516 Ninth Street, MS-29
Sacramento, CA 95814

VIA FACSIMILE (916) 654-4705

Dear Mr. Perez:

The Tulare County Board of Supervisors strongly urges the CEC not to recommend the extension of the MTBE deadline. Each day MTBE remains in our gasoline is another day that our water resources continues to be jeopardized.

The best solution to replacing MTBE is the use of ethanol. This renewable fuel can be made here in California, is abundant in the Midwest, and can be used now to replace MTBE. Your recommendation should include adjusting regulations to facilitate the maximum use of ethanol. The economic benefits of producing ethanol in our region offer exciting potential in the Central Valley.

Our Board appreciates your immediate attention to this urgent matter.

Sincerely,

Steven Worthley
Steven Worthley, Chairman
Tulare County Board of Supervisors

DEPARTMENT OF FOOD AND AGRICULTURE

WILLIAM (BILL) J. LYONS, JR., Secretary

1220 N Street, Room 452
Sacramento, CA 95814
(916) 651-7178
Fax: (916) 657-5017



February 25, 2002

California Energy Commission
Fuels and Transportation Committee
Attention: Pat Perez
1516 Ninth St., MS-23
Sacramento, CA 95814

RE: Comments on the Stillwater Associates report and presentation regarding Possible Impacts of MTBE Phase-Out on Gasoline Supplies

The California Department of Food and Agriculture is pleased to provide the following written comments to the Fuels and Transportation Committee regarding the Possible Impacts of MTBE Phase-Out on Gasoline Supplies. The Stillwater Associates report has concluded that replacement of MTBE with ethanol as a fuel oxygenate may lead to 5-10% fuel shortfalls under the current regulatory framework. This single factor has lead the consultants to recommend that the MTBE phase-out be extended by three years to November 2005. We believe this is a hasty conclusion given that the fuel industry has made large investments to prepare for the phase-out this year and that supply networks for additional fuel and blendstocks are still developing. Below, we critique some of the analysis in the report in terms of industry's capabilities to ensure supplies. We also comment on the vital need to understand the stranded costs from the gasoline and ethanol industry that have been aggressively preparing for the post-MTBE era and the environmental costs of another three years of MTBE contamination to California's water supply. These were not considered before drawing a conclusion and are not available for comment in this report. Finally, we believe an alternate conclusion of the report should be to recommend a careful examination of the CA Phase III Reformulated Gasoline regulations. If the predictive model underlying the regulations was updated with recent data on emissions from Tech 5 vehicles and optimized for ethanol blending, refiners would be able to increase volume production to ensure fuel supplies without compromising air quality. The review of the Phase III model could be fast-tracked by the Air Resources Board and would have a much lower cost associated with it than extending the MTBE phase-out deadline.

Below are comments on particular sections of the report:

Section 3.1: In Table 3.1, the numbers for "Direct Impact" should be compared with other volume estimates for blending CA Phase III RFG done by ARB, CEC or other credible sources. A better explanation of the blending methods utilized should also be included. Does this represent 5.7% ethanol blends? Under current regulations, 7.7% ethanol blends may be possible and may offer some volumetric/logistic

①

advantages. Also, if some updating of the Phase III model were to take place (discussed later), 10% ethanol blends would be possible. These alternative blending scenarios should be explored in terms of their impact on volume to determine where opportunities are to optimize the system without abandoning the MTBE phase-out.

- Section 3.1: The assumptions behind the figures for "Capacity Compensation" on Table 3.1 are not well explained in the text and don't seem to follow other sections of the report. For example, for "Identified blendstock imports by refiners" a figure of 10 TBD is used while on p. 35 it states that "up to 50 TBD could be mobilized at premiums over world market pricing that are not too different than California's higher historical price levels". It is not clear why an additional 40 TBD would not be available in this category, especially given that only the 10 TBD number is carried through over time in the analysis. Under "Major refinery capacity additions" only 22 TBD from a current RFG capacity project is included while several other sections of the report imply a significant incentive for refiners to convert conventional facilities to CA RFG III. Again this presents a problem in the analysis because it assumes that none of these activities will take place over time as demand for RFG increases. (2)

Section 3.2: The supply assumptions in this section are very weak and assume a gasoline industry that will not react to meet demand over time. As stated above, the report identifies opportunities for the industry to increase supply but does not include any of these in the analysis. Also, Figure 3.3 seems to show an existing shortfall of greater than 10% in Southern California although current prices are not significantly different than the northern region. This needs to be reconciled if the report's conclusion that a shortfall of this magnitude will result in a 100% increase in fuel price. (3)

Section 4.5.2: The lack of availability of tank storage is emphasized several times in the report as a limit to fuel supplies but it is not very thoroughly analyzed in this section. It is important to note that MTBE is handled largely as a maritime import while a large portion of the ethanol is anticipated to be delivered by rail. This should free up a significant portion of current maritime tankage for blendstocks and other products. This consideration is not accounted for in the analysis. (4)

Section 6.3: A delay in the MTBE phase-out deadline will increase the uncertainty over California's direction fuel regulation, will stall further fuel industry investment in infrastructure and capacity and will leave the petroleum industry and the ethanol industry with large stranded costs invested to meet the State's original deadline. A last minute change in direction will reduce the confidence of these players and perhaps make a transition to MTBE-free fuels more difficult in the future. The delay also has direct and indirect water and air quality costs to State taxpayers that should be properly addressed before drawing a conclusion to delay the phase-out. Without these sections the report is not complete. We would like to be able to comment on these before the final draft of the report is released. (5)

Stillwater Presentation: Avoided costs of \$1 to \$3 billion per year was presented as a benefit of delaying the MTBE phase-out. This comes out to 7 to 21 cents per gallon that is much lower than the 50 to 100% price increases that are emphasized in the (6)

report. These figures should be present in the report along with the assumptions underlying the values.

Finally, we believe that the alternative conclusion that could be derived from this report would be to review the States requirements for fuel blending. The report notes that it is not the blending of gas and ethanol, per se, but tight state restrictions on the way that ethanol must be blended that would reduce the volume of gasoline and increase the cost. The California Phase III Reformulated Gasoline regulations cause the tightening of post-MTBE gasoline supplies and other scientific information suggests that they should be reviewed. The predictive model underlying the Phase III regulations does not reflect recent data from Auto Alliance testing on Tech 5 vehicles and has not been optimized for ethanol blending. The model also does not match results from the US EPA Complex model. A recalibrated model would make ethanol-blended fuels more economically viable and could enhance gasoline supplies in the State of California while protecting air quality.

Two aspects of the Phase III Model make it difficult for ethanol to replace MTBE as a fuel oxygenate without resulting in shortages. The first is that the model shows a sharp increase in NOx emissions for oxygenate blends above the 2% oxygen level relative to the baseline fuel. This NOx penalty effectively prevents ethanol blending at levels above 5.7% in California resulting in a near 5% shortfall in fuel volume when compared with the current 11% MTBE blends. The NOx penalty is not well substantiated by recent testing and federal reformulation models. Recent Auto Alliance tests show that ethanol oxygenated fuels reduced NOx relative to non-oxygenated fuels in Tech 5 vehicles that represent 50% of the emissions. The US EPA Complex RFG model also shows reductions in NOx for oxygenated fuels in the opposite direction of the California model. While scientific differences may not be resolved, policy makers need to keep the perspective that what is being argued over is a very small change in ozone forming potential, whether positive or negative. There is a need to come to a scientific or policy consensus on this matter given that it could result in shortage issues. If 10% ethanol fuel blends were permitted as they have been in other ozone sensitive parts of the country, some of the shortage problems from using 5.7% ethanol blends or non-oxygenated fuel might be avoided. ⑦

The Phase III model may also not give enough credit for exhaust emissions reductions from the use of ethanol. The model shows about a 0.2 psi RVP credit going from 5.7% ethanol to 10% ethanol. However, the model assumes there is no CO benefit from Tech 5 vehicles. The Auto Alliance tests show significant CO reductions for Tech 5 vehicles as the percentage of ethanol increases. If this was incorporated into the Phase III model the RVP credit would likely double. Increasing RVP will improve total fuel yield at the refinery because fewer pentanes need to be removed from the gasoline. Increasing T50 limits for ethanol blends would also have a positive impact on gasoline yields. The emissions associated with higher T50 could be compensated by lowering limits for aromatics, sulfur or olefins. These changes would be optimizing the model for ethanol blending above 5.7% with no net impact on air quality.

We feel this Committee can take the lead in urging that the Phase III Reformulated Gasoline regulations be re-examined to create better alternatives for ensuring California's fuel supply while maintaining both air and water quality. Reforming the Phase III model to allow for yield optimized ethanol blends may be a critical step to take to give refiners better options for post-MTBE fuel supply. This is a solution that is relatively low cost and can address some of the supply fears presented in this report. The supply and infrastructure for ethanol and other components has been developing but will not continue to develop with uncertainty on behalf of the State. In the long run, ethanol may be the better option in terms of fuel security, economic stability and environmental quality because it is a renewable fuel that California has the resources to produce internally. MTBE and crude oil will always be imported and ever increasing amounts of it from foreign nations. It is important to keep the long-term sustainability of our energy supplies in mind when making these decisions.

California agriculture is well known for the food security it provides for this state and the nation, but it can also provide energy security by supplying ethanol to our transportation sector. Ethanol can be made directly from agricultural commodities like corn, sugarcane and other commodity sources of fermentable sugars within the State. It can also be made from agricultural residues and food processing wastes that are currently underutilized in the State and present waste disposal problems. Ethanol provides an opportunity for developing these agricultural markets and for rural economic improvement right here in California. It is also a renewable fuel source that reduces the State's impact on carbon formation and global climate change. All other alternatives for complying with State and Federal RFG standards represent money that is flowing out of the State for imported fossil fuels. These benefits to California's economy and environment should be factored into these fuel supply decisions. Delaying the phase-out of MTBE may or may not have a large impact on fuel supplies and prices, but it will have negative environmental effects and it will delay the development of a true native California fuel supply. Alternative approaches to deal with what is largely a regulatory problem should be sought.

Thank you for your important work on this issue and for considering these comments. If you have any questions or require further input please call me at (916) 653-5658 or Matt Summers at (916) 651-7178.

Sincerely,



Steve Shaffer
Director, Agriculture and Environmental Policy