MEETING

STATE OF CALIFORNIA

AIR RESOURCES BOARD

AIR RESOURCES BOARD

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JAMES F. PETERS, CSR, RPR
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PROCEDINGS

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CHAIRPERSON LLOYD: Would everyone take their

2 seats, please.

3 Good morning, the December 7th, 2000 public

4 meeting of the Air Resources Board will now come to order.

5 Ms. D'Adamo, would you please lead us in the

6 Pledge of Allegiance.

7 (Thereupon Ms. D'Adamo lead the Pledge of

8 Allegiance which was recited in unison.)

9 CHAIRPERSON LLOYD: Thank you very much.
Will the clerk of the Board, please call the roll.

SECRETARY KAVAN: Dr. Burke?
BOARD MEMBER BURKE: Present.
SECRETARY KAVAN: Calhoun?
BOARD MEMBER CALHOUN: Here.
SECRETARY KAVAN: D'Adamo?
BOARD MEMBER D'ADAMO: Here.
SECRETARY KAVAN: Supervisor DeSaulnier?
BOARD MEMBER DeSAULNIER: Here.
SECRETARY KAVAN: Professor Friedman?
BOARD MEMBER HUGH FRIEDMAN: Here.
SECRETARY KAVAN: Dr. Friedman?
BOARD MEMBER WILLIAM FRIEDMAN: Here.
SECRETARY KAVAN: McKinnon?
BOARD MEMBER McKINNON: Here.
SECRETARY KAVAN: Supervisor Patrick?
Riordan?
BOARD MEMBER RIORDAN: Here.
SECRETARY KAVAN: Supervisor Roberts?
Chairman Lloyd?
CHAIRPERSON LLOYD: Here.
Thank you. Just a note here on today's meeting.
Since the last meeting in the building, I have asked staff to video tape it or at least parts of it for posterity.
On January 25th, at our next meeting, we will be meeting at the Sacramento Municipal Utility District for our hearing on the Zero Emission Vehicle Program. And then in March we will be on the road. And then in April we've got our new facility at the Cal EPA building on 10th and I, so that's why you see the lights on today here.

So at this point, I would take great pleasure to have a special ceremony here. And that I would like to announce and invite Ray Menebroker to come up to the Board. While Ray is getting here, I think it's my pleasure to take the opportunity to honor one of the Air Resources Board's most valuable Branch Chiefs as he retires.

Ray Menebroker, Ray to us, has been on the Board for almost as long as it has existed. Ray's career began on July 31st, 1970 and comes to a close next week on December 15th, 2000. He has devoted over 30 years of his life to the pursuit of clean air.

Good morning, Ray.

PROJECT REVIEW BRANCH CHIEF MENEbroker: Good morning.

CHAIRPERSON LLOYD: In the early days, Ray learned the ropes of air pollution control doing field
work and investigation in the Enforcement Division. He then moved quickly into the management position in 1974 responsible for the Subvention Unit, where he administered grant programs in excess of $1 million. By 1976 he moved to Control Strategy Development on such sources as coke ovens, glass furnaces, stationary internal combustion engines, architectural COLINKS. In the eighties, Ray began working in fuels and energy and even spent a short time at the Energy Commission. Ironically, the questions of fuel supply and prices, siting new power plants and securing the best available control technologies would follow Ray for the rest of his career, and are as important today as they were when he started. He was promoted to Branch Chief in 1984 to manage the Project Review Branch and has been actively involved with the new source siting ever since. Ray is recognized as a national and state leader in the implementation of Title 5, Permits Program. He has participated nationally in the effort to reform new source review requirements and streamlined Title 5 permitting requirements. He manages the Portable Equipment Registration Program and has recently been active in the Board's diesel risk reduction efforts. Ray has extensive experience working with local
districts, industry, environmental groups and various stakeholders. He is widely known as a man of integrity and technical expertise. When you want a straight answer, Ray gives it to you and I can personally attest to that, by the way. And that's one of the joys during the brief time I've been here working with Ray, he's been an incredible resource.

When an agency has a person who is important and as well respected as Ray, there is need to give him special recognition and appreciation. On behalf of my fellow board members and myself, I am pleased to present Ray with a board resolution and personal thanks for a very long hard job well done.

Ray, you can look back over your career at the Air Resources Board knowing that the years you have given to the achievement of clean air for the citizens of California were well spent. We wish you well in your retirement. However, I think you should rename that, it's not really retirement. As Dr. Morgan reminded us several board meetings ago, retirement has killed many good men. So we wish you a good transition to future activities in the future and we recognize, and I hope that your expertise will not be lost for the citizens of California or the rest of the world, because the investment that you have made, the expertise that you have, we hope that you
At this point, I would like Executive Officer Mike Kenny to read the resolution and present you with a plaque.

EXECUTIVE DIRECTOR KENNY: The is the resolution that has been prepared.

CHAIRPERSON LLOYD: Mike, just before -- hopefully we've got a photograph somebody will be taking of this board resolution.

EXECUTIVE DIRECTOR KENNY: Board Resolution and it's dated today.

"Whereas Sections 39600 and 39601 of the Health and Safety Code authorized the Air Resources Board to adopt standards, rules and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law,

"Whereas Mr. Raymond Menebroker, has officially announced his desire to retire from public service after a long and productive career with the State of California,

"Whereas Ray began his career with the
Department of Water Resources in 1967 after graduating from Cal State University at Sacramento with a degree in Mechanical Engineering,

"Whereas Ray wisely moved to the Board in 1970 and even more wisely married his wife Vickie in 1971,

"Whereas Ray has dedicated his efforts and talents without reservation to the Board since that date with the exception of a brief sabbatical with the California Energy Commission in the early 1980s,

"Whereas Ray's substantial career accomplishments include landmark water engineering work on the AV Edmondson water pumping plant near the Grapevine, and precedent setting work on State and local air district rules and regulations that have had a significant impact on California's environment,

"Whereas Ray has established himself as a nationwide clean air policy expert on both the New Source Review Program and Title 5 operating permit program
resulting in the implementation of rules in California that have served as a model for the nation and has substantially improved new air pollution control technology,

"Whereas Ray has brought enough rocks to the United States Environmental Protection Agency to build a national monument to air pollution control while still maintaining his common sense and productive cynicism,

"Whereas Ray has complemented his technical competence with a great sense of humanity, kindness and ethical behavior that has endeared him to his friends and colleagues in California and throughout the nationwide air pollution control community,

"Whereas a public retirement dinner meeting will be held on January 12th, 2001 in accordance with the provisions of Chapter 3.5 commencing with Sections 11340 part 1, Division 3, Title 2 of the Government Code to honor Ray on his accomplishments and to allow his
co-workers, friends and family to wish him well in his retirement,
"Whereas the Board finds that even though we would like to keep him around for another 30 productive years, Raymond E. Menebroker meets all the requirements for retirement from the Board,
Now, therefore be it resolved, that the Board extends a heartfelt thank you to Ray for his superior quality work over the years and a fond farewell with the sincere wish that Ray enjoy a long retirement with his wife Vickie, daughters Heidi and Cari and son-in-law Matt.

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"Executed in Sacramento, California on the 7th day of December 2000."
Ray, congratulations.
(Standing applause.)
BOARD MEMBER HUGH FRIEDMAN: Stay for a picture.
PROJECT REVIEW BRANCH CHIEF MENE BROKER: Thank you for the kind words. I want to thank the Board. I've worked for every board chair and every executive officer that's been with the Air Resources Board. And it's been a good career and I wouldn't trade it for anything. I think
that it's a good organization and it's just been a pleasure.

I remember meeting Mr. Calhoun in 1970, I think wasn't it, Joe, when he was here with the Board. And there's a lot of people around here that I owe a debt of gratitude to. And I just want to thank everybody, because it has been a pleasure.

But the one thing that I got out of the Board was my wife Vickie. She and I worked here in 1970 together and that's where I met her. So good things come, too.

(Appause.)

CHAIRPERSON LLOYD: Thank you very much, Mike and Ray.

Just to link to what I mentioned earlier about our next board meeting to alert you that the staff report on ZEV's will be out some time tomorrow. So those of you who are waiting for that will have it. The Board Members also will get a synopsis of that report and should have it today or tomorrow.

I think with respect to the schedule, I'll just mention some slight changes we've made here. Hopefully that information has got out to many of you. The game plan is to complete the first four items on our agenda today, holding the research proposals and the not to exceed standards until tomorrow morning at 8:30 a.m.,
starting tomorrow at 8:30.

So if you're here for either of the two items I just mentioned, you may wish to come back then or stay for today's discussions.

We're going to start with SB 25, Standards Review today, followed by the Electric Vehicle Incentive Program and then the meeting to do LEV alignment.

That should take us to lunch time, plus or minus. We will intend to take a luncheon break and then we'll start the Lower Emission School Bus Program after the lunch break and continue that through the rest of the day into the evening as long as it takes, so we will bring that item to a close here today.

So hopefully that will give you a sense of where we're headed and fit into your schedules as well. Also,

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depending on the list of witnesses that we have signed up, I may be limiting the time allotted for witnesses to testify.

I think with that, I'd like to turn over to the first agenda item. Just a reminder that anyone in the audience who wishes to testify on today's agenda items to sign up with the Clerk of the Board. If you have a written statement, please provide 30 copies to the Clerk, if possible.

The first item on the agenda and item number
00-12-1 is a review of the Health-based California Ambient Air Quality Standards.

The children's Environmental Health Protection Act, by Senator Martha Escutia of Montebello requires several actions by the board.

First, we are to go back over our existing standards and regulations to make sure they took children's unique vulnerabilities into account and make any necessary adjustments on that score.

Second, we are to gather new data on children's exposure so that looking ahead we can make the right regulatory and policy decision to protect their health.

The Air Resources Board is not the only agency affected by this law. The Office of Environmental Health Hazard Assessment has a substantial role in helping us re-examine all medical data to see if our criteria or toxic air contaminant standards missed anything vis-a-vis children's health.

In addition, the Act directs CalEPA to establish a Children's Environmental Health Center. So, in fact, we're delighted to work with our sister here from OEHHA and delighted to see representatives here today.

Finally, the South Coast Air Quality Management District is required to directly notify schools of unhealthful air pollution levels, a program they've been
successfully operating for some time now under Chairman Burke's leadership. South Coast also has a ten-point Children's Health Protection program, again created by Chairman Burke.

Today, we will be taking the first formal action, board action, to fulfill one of the requirements of the new law.

Mr. Kenny, will you please introduce the item and begin staff presentation.

EXECUTIVE DIRECTOR KENNY: Yes. Thank you, Dr. Lloyd and Members of the Board. As you stated, the Board's first action under the Children's Environmental Health Protection Act is the approval and joint ARB-OEHHA report reviewing the current health-based California ambient air quality standards.

The purpose of this report is to determine whether in consideration of public health, scientific literature and exposure, the standards adequately protect public health, including infants and children. The report includes literature reviews, recognized experts on each pollutant with emphasis on health effects in infants and children, as well as information on California's air quality.

The report also contains OEHHA's determination as to which standards are inadequate and recommendations for
priority review of these standards. The report and recommendations were reviewed by OEHHA's air quality advisory committee. Dr. Deborah Dreschler from ARB and Dr. Lipsett from OEHHA will now present the joint report. Dr. Michael Klansman, Chairman of the Air Quality Advisory Committee will present an overview of the Air Quality Advisory Committee's review and its recommendations for priority review of standards considered inadequate to protect public health.

AIR POLLUTION SPECIALIST DRESCHLER: Thank you, Mr. Kenny. Good morning, Dr. Lloyd and Members of the Board.

(Thereupon an overhead presentation was presented as follows.)

AIR POLLUTION SPECIALIST DRESCHLER: My presentation will include an overview of the Children's Environmental Health Protection Act and a description of the process staff, from the Office of Environmental Health Hazard Assessment, OEHHA, and the ARB used to prepare the joint staff report and recommendations before you this morning.

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AIR POLLUTION SPECIALIST DRESCHLER: This will be a three-part presentation. First, I will present an introduction to the Children's Environmental Health
Protection Act and its requirements along with an overview of the ambient air quality standards review process as it relates to the Act.

Second, Dr. Lipsett of OEHHA will summarize the results of the scientific review process. And third, Dr. Mike Kleinman, Chair of the Air Quality Advisory Committee, will present an overview of the committee's review of the staff report along with the committee's recommendations for the priority order for review of the standards.

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AIR POLLUTION SPECIALIST DRESCHLER: The Children's Environmental Health Protection Act was introduced into the Legislature by State Senator Martha Escutia as Senate Bill 25 and was signed by Governor Davis in late 1999. The Act includes a number of new requirements to ensure that ambient air quality standards and toxic air contaminant regulations are adequately protective of susceptible groups in California.

Among potentially susceptible groups, the Act has a special focus on protection of infants and children.

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AIR POLLUTION SPECIALIST DRESCHLER: The Act has several requirements. The ARB in consultation with the OEHHA is required to review all health-based ambient air
quality standards and to determine whether the standards are adequately protective of infants and children. The bill requires the ARB and OEHHA to review the list of toxic air contaminants, and, if necessary, revise control measures for toxic air contaminants to reduce exposure to toxic compounds. The ARB must also evaluate the adequacy of the current air monitoring network with regard to whether it provides adequate estimates of children's air pollutant exposure.

Six new air quality monitoring sites will be operated in areas that are currently out of attainment of State ambient air quality standards.

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AIR POLLUTION SPECIALIST DRESCHLER: Two additional requirements of the Act included for the South Coast Air Quality Management District is to notify schools, and where feasible, day care centers when air quality standards are exceeded. The Act establishes the Children's Environmental Health Center within the California Environmental Protection Agency. The center is to serve as the chief advisor to the Secretary of the California Environmental Protection Agency and the Governor on issues of environmental health protection of children.

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AIR POLLUTION SPECIALIST DRESCHLER: The first action required by the Act is that ARB, in consultation with OEHHA, review the health-based ambient air quality standards with emphasis on the adequacy of protection of infants and children. Standards that are considered inadequately protective of public health must be prioritized for complete review and possible revision. Both of these activities are to be completed by December 31st, 2000.

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AIR POLLUTION SPECIALIST DRESCHLER: The ambient air quality standards reviewed were those for PM 10, or Particulate Matter, ten microns or less in aerodynamic diameter, sulfates, ozone, nitrogen dioxide.

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AIR POLLUTION SPECIALIST DRESCHLER: Lead, carbon monoxide, hydrogen sulfide and sulfur dioxide.

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AIR POLLUTION SPECIALIST DRESCHLER: The initial step in the ambient air quality standards review process involved preparation of scientific literature reviews by recognized health experts. Each health expert provided a written report to OEHHA and the ARB evaluating the health protectiveness of one or more of the State ambient air quality standards.
These were not exhaustive reviews. Rather, they focused on whether there was evidence suggesting adverse health effects, particularly in infants and children with exposure to pollutant concentrations at or near the current standards.

The ARB and OEHHA then integrated the information on pollutant exposure and from the literature reviews into a draft report which was available for public comment and was also presented to public workshops. Following the public comment period, the report was reviewed by the air quality advisory committee, OEHHA's outside advisory review panel, which is comprised of world recognized health experts on health effects of air pollution exposure.

The air quality advisory committee reviewed and discussed the draft staff report at a public meeting and made recommendations as to which standards appeared to be inadequate. The Committee then made recommendations as to the priority order for review of the standards considered possibly inadequate.

After the air quality advisory committee meeting, the draft report was revised to incorporate the comments of the Committee and the public. It was, again, made available for public comment and is today presented to the Board for approval.
AIR POLLUTION SPECIALIST DRESCHLER: The Act requires that the Board publish a report summarizing the review of the adequacy of the State ambient air quality standards and that standards considered possibly inadequate be prioritized for further review no later than December 31st, 2000.

Today, you, the Board, will consider for approval and publication the staff report.

And the Act requires that the highest priority standard be extensively reviewed, and, if necessary, revised by December 2002. The report conveys the recommendation of the staffs of the ARB and OEHHA as well as the air quality advisory committee that particulate matter including sulfates should be the first standards reviewed.

And the Act further requires that any additional standards which are deemed not sufficiently protective undergo extensive review, and, if necessary, revision at the rate of one per year starting in 2003. And the staff report will also be valuable guiding research planning over the next several years so that our research efforts support the standards review process.

I would now like to introduce Dr. Michael Lipsett from OEHHA who will present the pollutant reviews.
DR. LIPSETT: Good morning, Chairman Lloyd and Members of the Board. I'm pleased to be here to present our recommendations to you regarding SB 25.

Next slide, please.

DR. LIPSETT: And as Dr. Dreschler mentioned, our role in the process initially has been to review all of California's health-based ambient air quality standards, and during the process to determine whether the standards adequately protect public health, with an adequate margin of safety. The bill, as mentioned, focuses particularly on infants and children, however, not to the exclusion of other potentially susceptible subgroups.

Next slide, please.

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DR. LIPSETT: This is the list that Dr. Dreschler has already presented to you, so I won't dwell on this one here.

Next slide, please.

DR. LIPSETT: Now, the guidelines that we used to evaluate each of the standards included five principals really. We looked at the extent of the evidence of health effects reported to occur at or near the level of the
existing standard. We tried to assess from the literature the nature and the severity of these health effects.

Next slide, please.

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DR. LIPSETT: The magnitude of the risk expected for each one of the particular health effects identified. And that magnitude of risk consists of looking at the kind of the baseline level of the particular health effects and also the potential increase in risk that might be related to exposure to the particular pollutant.

We looked for evidence specifically indicating that children might be more susceptible than adults to exposures to a given pollutant. And then, finally, we tried to assess the degree of exposure in the State relative to the level of the standard.

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and review by our Air Quality Advisory Committee.

Next slide, please.

DR. LIPSETT: The bottom line of our evaluation was that the health effects may occur in infants, children and other potentially susceptible subgroups exposed to some of the pollutants at or near levels corresponding to their ambient air quality standards.

Now, of these eight pollutants or pollutant classes, we divided them into two tiers.

Next slide, please.

DR. LIPSETT: The Tier 1 standards included those for which evidence indicated their potential risk to public health at or near the current level of the

standard, and they included PM 10. And within that, even though there was a separate sulfate standard, we thought that in looking at the PM 10 standard, we ought to also include sulfates because they really are a subclass of PM 10; ozone and nitrogen dioxide.

Next slide, please.

DR. LIPSETT: Then for Tier 2, we found either that the scientific evidence was less certain about the potential risks to public health or that public health
protection is already provided through other regulations. And this latter criterion applies specifically to lead.

Next slide, please.

DR. LIPSETT: Now we received a number of public comments which I'm going to be summarizing in the following slide.

First, was that the PM standard in California should be reviewed, but during the process of review, we need to focus on which components of PM 10 are likely to be causally related to the effects observed.

One of the other extensive comments related to making sure that we evaluate the potential effects of indoor sources of particulate matter and also that the commenters, two commenters, indicated that they felt that the allocation of nitrogen dioxide into the first tier was in their opinion inappropriate because they felt that for the most part that throughout California their nitrogen dioxide standard has been met.

Next slide, please.

DR. LIPSETT: And then were a series of comments related to ozone. And these commenters felt that ozone should be a priority for review, because the background concentrations within California had not been adequately
considered, the time indoors should be considered in assessing exposure, and that is that because people spend so much time indoors and that ozone is pretty active, that exposures are likely to be lowered than what's indicated by the ambient monitors.

The third comment was that the US EPA in its 1997 revision of the ozone standard had undertaken a risk assessment suggesting that there, at least in the commenter's opinion, that little public health impact would be -- would result from further reductions in either the federal or the California standard.

And finally, the commenter felt that transient lung function changes, which are observed consistently at low levels of ozone exposure, but they felt that these might not be considered to be adverse health effects.

Next slide, please.

---OoO---

DR. LIPSETT: Well, our Air Quality Advisory Committee did review the summary reports that we produced and the overall expert reports as well. And the commenters also appeared -- the commenters responsible for those, the last two slides, appeared and made presentations as well at the Air Quality Advisory Committee.

And the Committee ultimately concurred with our
designation of pollutant designations into Tier 1 and Tier 2. The Committee members felt, however, that within Tier 2 the carbon monoxide should be the top priority. And then, finally, they made a number of relatively minor technical suggestions for improvement of our document which had been incorporated.

Next slide, please.

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DR. LIPSETT: Now, I'm going to be concluding with the slide that shows our recommendation was that the PM 10 ought to be the first and the highest priority pollutant to be reviewed in the process. The last review that took place for the particulate standard was in 1982 and 1983. And since that time, there have been many, many studies published linking particulate matter exposure in cities throughout the world to increased daily mortality, to chronic mortality, hospital admissions, emergency room visits, lung function changes and other adverse health effects.

There are also documented effects in children and infants in the country and in a number of other countries that had been reported. And finally, most Californians are intermittently exposed to levels of PM currently that exceed the standard in California.

And with that, I'd like to conclude my
presentation and turn it over to Dr. Michael Klansman, the
chair of our Air Quality Advisory Committee.

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AIR QUALITY ADVISORY COMMITTEE CHAIRPERSON

KLEINMAN: Thank you, Commissioner Lloyd and Board
Members. The Air Quality Advisory Committee met on
December 7th -- I'm sorry, on December 7th was not the
date -- on October 12th, to review the staff draft
document on, review and adequacy of the California Air
Quality standards. Can I have the next slide, please.

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AIR QUALITY ADVISORY COMMITTEE CHAIRPERSON

KLEINMAN: We reviewed the Commission critical reviews on
the recent health effects literature which specifically
focused on the health effects of air contaminants on

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children. And I'm just presenting here the names of the
individuals who actually authored the reviews.

These have been summarized and used as the basis
for the staff document prepared by Dr. Ostro and Dr.
Lipsett and their staff. And, in general, the Committee
found that these reports were very well assembled. They
served the purpose to which they were defined.

May I have the next slide, please.
KLEINMAN: They were comprehensive and they responded to the needs of the Air Resources Board and OEHHA. There were concerns raised during the course of our discussions over the rather narrow and sometimes nonexistent margins of safety between the existing standards and levels at which health effects are seen.

There were also some suggestions that improved monitoring and data handling capabilities could now allow the reviewers of the health data to provide new data to allow us to look at better identifications of averaging times that might be important with respect to responses on the health basis to air pollutants and also to perhaps in the future define better pollutant metrics.

Next slide, please.
KLEINMAN: In Tier 2 various concerns were raised for each of the pollutants. For example, I've just selected out a few that hydrogen sulfide, for example, that the adequacy of monitoring association of levels of complaints with levels of exposure have been documented, but not very well, and that there are new data available from several of the air quality management districts that might help provide new light on health effects from hydrogen sulfide.

With sulfur dioxide there does seem to be some new data in the literature that indicate that the margin of safety has been somewhat eroded by the most current data. And with carbon monoxide, there are very few real studies done with children. And although there are several that imply and suggest important health effects, the data has not currently been very compelling, but they raise the level of concern sufficient that carbon monoxide should be given the highest priority in Tier 2.

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KLEINMAN: And I believe that summarizes the overall comments that we received.

In general, our committee recommends this report to the Board for its approval.

CHAIRPERSON LLOYD: Mr. Kenny, do you have any
final comments?

EXECUTIVE DIRECTOR KENNY: Nothing further.

CHAIRPERSON LLOYD: Thank you very much. I would also like to express my appreciation to Dr. Klansman, good to see you here, Mike, for your work and for summarizing the Committee's recommendations. I'd also like to say how fortunate we are to have the caliber of the people we have to review these standards across the Board. So I think it's a particular pleasure for me to see that and gives me a lot of confidence that what we're going to come out with is, in fact, going to be a first rate report, starting out with the particulates. And I guess before I turnover it over to the Board -- yes, Dr. Friedman.

BOARD MEMBER WILLIAM FRIEDMAN: Well, I also really do do appreciate not only the amount of work that went into this but the quality of the work that went into it. And I think that the report is fully compliant with the requirement of SB 25.

I want to make a number of comments and I don't want to get too discursive. But as someone who's devoted most of his life to studying developmental phenomenon, I really appreciate the difficulties in creating a developmental framework to analyze age-dependent susceptibilities to anything, let alone pollutants. It's not dissimilar to the issues of how do you do drug doses
for children and infants compared to adults and all the rest of it. It's not just simply by size or surface area or age or whatever. It's very difficult.

And what makes it extremely difficult are that animal studies don't really apply very well, because rates of maturation in all the species we use are very, very different from the human species. And as I read through all these reports, and they're very, very good, I sort of have to toss out the comparisons between adolescents and adults. That's really not what this is focused on. This is an infants/children kind of an issue and the data is very soft, because it has to be soft since we don't expose infants and children as guinea-pigs specifically to test a hypothesis. And it makes it very difficult.

I found myself wishing that there was a bit of an introduction to the wonderful reports that all of our friends wrote that just stated and recognized the problems with age-dependent analyses of any kind. That's sort of not a preamble to all of this and it would educate not only the people in the Legislature who are interested in this, but all subsequent analyses as we continue to do research and develop prospective data.

So I had hoped that a couple of pages would just recognize the generic issue of how difficult age-dependent studies are, and could be included at some future time.
That was point number one.

Point number two, and I was really glad to see Dr. Lipsett including some of the so-called criticisms of some of the folks that responded and, frankly, the criticisms, to some degree, were specious in my opinion, especially with respect to the business about ozone and oh, physiological effects are transient and they don't really matter because they're physiological. Well, anybody who takes care of people understands that physiological adaptation is repetitive, overcompensates and creates disease.

So in the written comments that you got, in particular about ozone and we shouldn't worry about it because some of these effects on kids are transient, misses the point entirely. That transient does not mean safe. And I appreciated your having that included in your slide.

I had one comment. I thought the reports were very well done and clearly they can't be completely comprehensive. And because different folks prepare different portions of the report, I thought there was a little bit of unevenness in the emphasis on the relationship between oxides of nitrogen and some of the findings most recently in the Children's Health Study with respect to lung development. For example, in Mark
Frampton's report, which does reference the early findings of the John Peters group, it just references nitrogen dioxide as having an effect on kids with asthma, but doesn't even remark on the potential for diminished lung growth, which is far more potentially important in terms of its implications.

And so I think it would have been helpful to have an extra sentence or two in that report, because I think it's one of the most important findings that we've heard about from the research that we're funding.

And I really appreciate Dr. Kleinman's remark, prospectively, between the Children's Health Study and the Fresno initiative where we may actually have an opportunity to gather the kind of data that finally will be, if not, a gold standard, at least a silver standard and be scientific.

The last point I want to make, this is a spectacular group of experts, really knowledgeable in all these areas with respect to the lungs and with respect to pollutants. We're about to create a Children's Environmental Health Center within the EPA. I think that if you're going to develop a Children's Health Center, please ask some children's experts to participate.

There really are a number of people who have a specific interest, expertise and focus on pediatric,
pulmonary and other issues that really need to be
represented in the group of folks, whoever are picked, to
provide expertise to the California EPA.

So I hope that that process really reaches out
beyond the, you know, usual superb group of folks that we
deal with all the time into the community that's
interested in development, because that's what we're
talking about here, infants and children, and it's very
difficult to analyze them.

So given those couple of remarks, I really, as I
said at the very beginning, this was a big effort. I
think I understand a bit of, you know, you want to get
some attention, put infants and children out front. Don't
just put them out front, let's actually do something.
It's like the politician who kisses the child to get

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elected and then forgets about the child because the child
doesn't vote.

Well, I really hope that we really continue the
activity and I appreciate the compliance entirely with SB
25 and I compliment you guys on a really good job.

Thank you.

CHAIRPERSON LLOYD: Thank you for those excellent
comments, Dr. Friedman.

Ms. Riordan.

BOARD MEMBER RIORDAN: Mr. Chairman, it occurs to
me, do we have the time to perhaps do the preamble that
Dr. Friedman indicated? I think it's a good idea if we
could do it. It appears to me it has to be in to the
Legislature, when, no later than December 31st. And his
comments were something that would be less than two pages,
so could we include that?

BOARD MEMBER WILLIAM FRIEDMAN: Barbara, I think
it takes more than a week and a half with Christmas coming
up to do justice to it. And I think you have to identify
someone who would be thoughtful and wise enough to do it.
I'm less interested in getting it in right now
than our understanding that it needs to be part of a
future commentary that creates a framework within which
all the future findings, because this is not going to go
away, can be recognized. I don't think it can be done in
two weeks. Maybe it can.

DR. LIPSETT: Could I respond to these comments,
briefly, please?
I was just told by Dr. Melonee Marty, who's the
Chief of our Air Toxicology and Epidemiology section, that
we actually have a document that was recently presented at
a public meeting, that it's almost as if it was tailor
made to deal with this, so this is something that probably
could be either incorporated or attached.
The other comment I wanted to make was I
appreciate your thoughtful comments. And I certainly agree that with toxicologically controlled types of exposures, it's very difficult to try to -- I mean ethically it's not possible really to deal with the children. However, we do, in addition to that, we do have epidemiologic studies, which, you know, observes children, free-living children in their natural environment. And I think that the interpretation of these studies with respect to the standards is somewhat less problematic. But I certainly agree with the difficulties of looking at the age dependence of specific effects and how those carry through in development and into an adult. And evidently we do have a document that we could attach to it within a week or two.

BOARD MEMBER RIORDAN: I'm just thinking of those who are going to be very interested initially with the first report. And I think the point is well made, if you draw those items that you mentioned to their attention, it is, I think to our advantage to let them know early on some of the difficulties, in that preamble.

So, I mean, that's -- if it could be done, that would be wonderful.

BOARD MEMBER WILLIAM FRIEDMAN: Sounds like it's been done, that would be terrific. I'd love to see a copy.
DR. LIPSETT: I have not seen this document. Dr. Marty has just assured me though that it would meet the specifications of what you would like. The other thing, too, is we could attach a copy or at least reference the latest publication of the Children's Health Study. The study had not yet been published at the time Dr. Frampton wrote his report or when we wrote our summaries, but it has come out in the last month in the American Journal of Respiratory and Critical Care Medicine.

And we could either, if you would like, we can add a couple of sentences about or we could attach it as well?

BOARD MEMBER WILLIAM FRIEDMAN: I think both would be indicated, frankly.

DR. LIPSETT: Okay.

CHAIRPERSON LLOYD: Seeing Dr. Marty back there, is there any chance we could get a copy of that report today?

DR. MARTY: I could probably have it faxed up.

CHAIRPERSON LLOYD: That would be great.

Any other comments or questions?

Dr. Burke.

BOARD MEMBER BURKE: Can I ask Dr. Friedman a question? I've gotten testimony in the past that waffled kind of on this issue and I wondered if you could clarify
If you have a given unit of pollution and an adult is exposed to that given unit of pollution and a child is exposed to that given unit of pollution, given the smaller lung size of the child, is the effect on the child geometrically proportionate to the effect on the adult? And the second part of the question is, is there, in fact, then a domino effect on the child which would not be found in the adult?

BOARD MEMBER WILLIAM FRIEDMAN: There are so many different aspects of that issue, first of all. There may or may not be a relationship between the size of the lungs and the size of the insole. The volume of distribution of insole may be different, but the concentration of the insole depending on the rate of breathing or what have you is so different, the child may be breathing at 30 to 40 times a minute and an adult 12 times a minute. But it may or may not have an effect depending on what the enzymes responsible for metabolizing the pollutant is with respect to age.

A kid may be revved up as a full-speed machine and most adults that I know are not going at full speed anymore. So, you know, there are so many variables that there's not a simple answer. And you'd like to think that, you know, children, by definition, are vulnerable,
when, in fact, in certain cases they're less vulnerable, depends on the insole. And that's the reason, you know, the epidemiology explains it. There's never control of all the variables you'd like to know in an epidemiologic study, to respond to your question.

And so what I've just done is a typical professorial way of telling you I don't know with four paragraphs.

(Laughter.)

CHAIRPERSON LLOYD: Mr. McKinnon.

BOARD MEMBER McKINNON: Also for Dr. Friedman.

You talked about we're working on including the study. You also talked about, kind of, a practical step that we should include experts in the future. Should we add something to the resolution, a line or something, that talks about including folks that do developmental medicine or research?

BOARD MEMBER WILLIAM FRIEDMAN: I don't see any harm. I think that would be fine. I don't even know exactly how the process of appointment and identification will occur. I mean, we're all on board in wanting the very best people. If we can, sort of, have a little asterisk reminder, it certainly would be helpful.

I'm not anxious that we take over or make specific recommendations, just that we be mindful of how
we have to reach out to get folks with that specific interest on that environmental health center. So if it's possible to add that sentence, we ought to do it.

CHAIRPERSON LLOYD: I think here at the bottom of the first page, it says, "By current standard by recognized independent expert." We could put a paren there, "including", if that would be appropriate?

EXECUTIVE DIRECTOR KENNY: That's fine.

CHAIRPERSON LLOYD: Any other questions? I know I think we have one witness signed up. But before that I'd like to ask, again, I see in the resolution PM 10, "including sulfates by December 31st, 2002." In all honesty, from my viewpoint, that's not good enough. We have to do it much faster.

This is an area where there's great concern. We heard it last board meeting, we'll hear some more today, this afternoon, I'm sure, about particulates, relative toxicity, et cetera. I think we need to accelerate it. I know it says by December 31st, so there's the caveat there. But from my experience when you've got a "by" it's always "at". So I would suggest that we try to, you know, aim for something like the Spring of 2002, because I don't think it's unreasonable. It's over a year to get the work done.

And there's a lot of emerging data here and in
Europe. And I recognize we'll never have all the
information we need, but I would request that we actually
put a harder target in there, because we're going to need
the information, and sooner rather than later.

Dr. Lipsett.

DR. LIPSETT: Could I respond to that? I think
we will make every effort to accelerate this process, and
we'll work and ARB staff. I think it will be necessary to
probably contract out part of the reviews as we did for
the initial process, but we will make every effort to try
and accelerate it.

CHAIRPERSON LLOYD: That will be great. And
maybe I'd request the Executive Officer, if we see a
reason why this can't be met, keep us informed.
Otherwise, I will look for something in the Spring of

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2002.

EXECUTIVE DIRECTOR KENNY: All right.

CHAIRPERSON LLOYD: We have one witness signed up
today Brian Lamb, District Counsel with the Great Basin

APThatD.

Good morning, Brian.

MR. LAMB: Mr. Chairman, honorable members. With
the lights and the cameras, I have to keep reminding
myself I'm not addressing the Florida Supreme Court.

(Laughter.)
MR. LAMB: I call you "Your Justices." I'm the District Counsel for the Great Basin Air Pollution Control District. We're the air pollution control district comprised of Alpine, Mono and Inyo counties, all of the Eastern Sierra counties. We have four nonattainment areas for particulate matter, including what EPA has designated the largest single source of particulate matter pollution in the United States, which is the dry lakebed of the Owens Dry Lake.

And, at this time, I'd be remiss if I didn't acknowledge the contributions of several Chairmen of the Air Resources Board, past and present namely John Dunlap, Chairman Riordan, and our current Chairman Lloyd for their encouragement and support in getting us to address the air pollution off the Owens Dry Lake.

The status now is that the City of Los Angeles has hired a contractor for $72 million to implement the first phase of the control measure. They have structurally retrofitted the California -- I'm sorry, the Los Angeles aqueduct to provide the water to control 13 and a half square miles of the Owens Dry Lake, which is more than one-third of the area that's been described as needing control.

So we're making progress. And a lot of the credit for that comes from the encouragement and support
we've gotten from the top at ARB.

On behalf of my APTeen Ellen Hardbeck, I am here
to endorse the recommendation that you make particulate
matter your first priority for review. We see in our
district the effects on sensitive populations of
particulate matter. We have a number of Indian
reservations, some of which are very close to Owens Dry
Lake and to other sources of particulate matter. We have
a Navy base, which is actually in Kern County, but which
is affected very often by transport from Owens Lake and we
see acute episodes of both respiratory and cardiovascular
complaints based on these events.

I think I wanted to, along with the -- in picking
up on Dr. Friedman's comments, that we're kind of in a
funny situation with respect to the legislation by the

State Legislature, which is asking us to review the
location of our goalpost for particulate matter. At the
same time, our statewide structure for making progress
toward attainment of the State standards is very different
for particulate matter than it is for, say, ozone and
certain other particulate -- certain other pollutants.

In particular, we don't have, in California, the
same planning and control requirements for particulate
matter as we do for ozone and other pollutants. So,
although we do planning and we do controls and we have
deadlines under the federal Clean Air Act, for reasons that aren't always clear, particulate matter has been exempted from those planning and control requirements under the California Clean Air Act.

So on the one hand, the Legislature is advising us, perhaps, to move the goalposts back for particulate matter, without providing us with a gameplan or a playbook or a time clock or requiring us to develop or adopt those to make real progress toward attainment of the State standards.

The dichotomy between the treatment of the State standard for particulate matter and for ozone has actually come up several times in the regulatory context in our district, where we've had to actually convince sources that the PM standard was an enforceable requirement and not just a goal. And whenever that happens we call Leslie Krinsk and she gives us the right opinion, that it's a State requirement.

So I think when we look at the total framework for addressing particulate matter pollution in California, we're going to have to come to the issue of are we going to have a statewide plan or a statewide requirement of actually meeting these goals other than just addressing what the level should be.

One third point, and it's a little technical and
we've addressed it on the Board once before, so for a reason that's not really clear, the particulate matter standard for the State standard not only tells you what the level of the standard is, it tells you what kind of monitor you can use to determine the level of the standard.

So in 1985 when the State standard was adopted, the State of the art for measurement of particulate matter was the high volume size elective inlet monitor which is an Anderson Sampler. And in fact, I have the staff report from 1985 and the staff said we have direction from the Board to make sure that our monitors that we require are the same as the monitors that EPA is going to require.

Well, what happened is this requirement of using that particular kind of monitor was set in stone. When the standard was adopted, monitoring technology has moved on, we find ourselves in the funny situation very often of we're using EPA reference-method samplers and equivalent-method samplers. All around Owens Lake we're setting up more monitoring stations.

But in order to measure for the State standard, we would have to buy the old kind of monitor that most people don't use anymore, and which we feel, in our situation, is not as accurate as the most current monitors. So I'm asking your staff and you to consider in
reformulating this standard to allow for or provide that the districts can use the federal reference method monitors for attainment purposes of determining attainment with the State standard.

CHAIRPERSON LLOYD: Thank you. I presume on the latter point that the way in which you would actually measure the concentration to compare the standard would be addressed in the review.

EXECUTIVE DIRECTOR KENNY: I'm going to presume the same thing.

CHAIRPERSON LLOYD: I think that. You make a good point and clearly we feel that we're continuing to be leaders in the area. And what you're saying is we have to compare it with some old technology. I understand that may probably be the rationale, but it seems that we should revisit that.

MR. LAMB: Thank You.

CHAIRPERSON LLOYD: Thank you very much. Have you got any other comments, Mr. Kenny?

EXECUTIVE DIRECTOR KENNY: No.

CHAIRPERSON LLOYD: Since this is not a regulatory item, it's not necessary to officially close the record. However, we do have a resolution before us and I know we have Dr. Friedman's suggestion that I hope that we will include that. I would also, if my colleagues
would be okay, I'd like to also include there that we
would try to complete the particulates by say April 30th,
2002 preferably, but no later than that.
So we're trying to ask the staff to do a little
bit of pressure. In all honesty, I think we do this with
the industry all the time, we keep pressure on. I think
it's -- why shouldn't we pressure the Government in this
case and some of our consultants. So I have every
confidence that we can meet those deadlines.
Do we have a motion for the resolution.
BOARD MEMBER WILLIAM FRIEDMAN: So move.
BOARD MEMBER RIORDAN: Second.
CHAIRPERSON LLOYD: All in favor say aye?
(Ayes.)
CHAIRPERSON LLOYD: Unanimous. Thank you very
much and thank you Dr. Kleinman, Dr. Ostro and Dr. Lipsett
as well our staff, thank you.
We'll take a moment while we change staff and go
on to the next agenda item, that's the proposed guidelines
for the ZEV incentive program.
(Thereupon a pause in the proceedings occurred.)
CHAIRPERSON LLOYD: I'd like to continue with the
next item. The next item on the agenda today is 00-11-2,
Proposed Guidelines for the ZEV Incentive Program.
The incentive program is very timely and
Assembly Bill 2061 by Assemblyman Alan Lowenthal of Long Beach provides $18 million in grants for the purchase or lease of new zero emission vehicles during this critical ramp-up period to the 2003 ZEV requirements. A little more than two months ago, the Board held its Biennial Review of the ZEV Program. Staff described the results of its intensive investigations on the status of ZEV development and implementation.

We also have an abundance of public comment from automakers, to battery manufacturers, ZEV drivers electric utilities and environmental groups. In addition, we received more than 85,000 letters and cards on the matter. We heard that ZEVs are significantly cleaner than the alternatives even after taking power plant emissions into account. We also heard that EV drivers love their vehicles and that ZEVs are capable of meeting almost all of their transportation needs and are fun to drive as well.

But we were also told that there was a problem, there are no ZEVs available. And we heard significant disagreement over the marketability of today's ZEVs. Cost, range and recharge time are major concerns, with cost remaining a huge factor. ZEVs today are more expensive than their conventional counterparts and will continue to be so for the foreseeable future.
After listening to the testimony, the Board unanimously decided to keep the ZEV mandate in place. Half of our State's smog-forming pollutants come from motor vehicles. All together these vehicles drive a quarter of a trillion miles per year, a quarter of a trillion miles per year. We need more than low emissions. We need zero emission vehicles. We also need the technological innovations that have resulted from the ZEV mandate. ZEVs are sometimes referred to as our gold standard, with no tailpipe or evaporative emissions and no emission control equipment to degrade.

The Board did address concerns on several items: In particular, the need for product availability, the cost, the uncertainty regarding market demand, the cost and the need for incentives. We directed staff to develop and propose regulatory modifications and other steps that address some of these challenges to the successful long-term implementation of the ZEV Program. As I mentioned earlier, staff will be coming back to the Board on January 25th, 2001 with a specific proposal. As I mentioned before, the staff report will be out tomorrow. As luck would have it, the State Legislature was working at the same time on its own contribution to the ZEV Program, an $18 million grant program. And it, in fact, was signed by the Governor into
So I'm looking forward to staff's presentation of how we can quickly put the money to use to address some of the concerns that the Board expressed at the ZEV hearing, so that, in fact, we can get these programs on the road quickly and address some of our not only air pollution concerns but also our fuel diversity.

At this point I would like to ask Mr. Kenny to introduce the item and begin the staff presentation.

EXECUTIVE DIRECTOR KENNY: Thank you, Mr. Chairman and members of the Board. Today staff is proposing guidelines for a ZEV incentive program pursuant to AB 2061. Governor Davis signed this bill into law on September 30th and it became effective immediately as an urgency bill. We believe it is important to get the program up and running because the bill authorizes grants for the purchase or lease of ZEVs beginning October 1st, 2000.

Staff has worked many long hours over a very short period of time to bring these guidelines to you. This is a significant ZEV incentive program. Eighteen million dollars in grants. The is also a timely proposal, providing incentives for ZEVs between October 1st, 2000 and December 31st, 2002, the ramp-up period to the 2003 ZEV requirements.
ARB is directed to develop and administer the program in consultation with the California Energy Commission and the Department of Motor Vehicles. Local air districts can also administer the program in their jurisdictions on a voluntary basis. The program would provide a maximum grant of up to $9,000 for each eligible ZEV purchased or leased by individuals, local government agencies, State agencies, nonprofit organizations and private businesses.

The air districts are also allowed to augment these grants. There are sufficient State funds for, at least, 2,000 ZEVs. The bill directed ARB to develop guidelines for the grant program. Staff received input from various stakeholders, from the bill sponsors, the Board, the air districts and some vehicle manufacturers and dealers in developing the proposed guidelines. These guidelines contain a schedule for implementing the program and identifying the recipients, a criteria for eligible vehicles, procedures for administering the program and criteria to be met by air districts volunteering to administer the program.

Judy Yee will make the staff presentation.

Judy.

(Thereupon an overhead presentation was
AIR POLLUTION SPECIALIST YEE: Chairman Lloyd, members of the Board, for today's agenda staff will provide an overview of Assembly Bill 2061, describe staff's proposed guidelines for implementing the zero emission vehicle, the ZEV, incentive program created by this bill, identify some issues that remain, offer staff's recommendation for some changes to the proposed guidelines and list the steps that staff will take to implement the program.

We will conclude with a summary.
available for grants up to $9,000 per vehicle to help
consumers statewide purchase or lease 2,000 or more
to vehicles, adding significantly to the more than 2,300 ZEVs
already on the road. The program is timely. It will
operate now up to 2003, during a period where automakers
are not required to make ZEVs available.

Currently, there are none or very few ZEVs
available to consumers or fleets. Staff reported to the
Board in September that it believes that a ramp-up to the
model year 2003 ZEV requirements is critical to building
ZEV demand and a sustainable market.

California has stepped up to the plate with a
significant $18 million incentive program. The program
and adjustments to the ZEV regulation to be presented to
the Board in January will have the potential to be

significant stimuli, so that ZEVs become more available
and demand for ZEVs can be met.

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AIR POLLUTION SPECIALIST YEE: The Air Resources
Board, ARB, is to develop and administer the program. The
Energy Commission is to assist the ARB by providing
information needed to establish incremental costs used to
calculate the maximum available grant for an eligible ZEV.
More details will be provided when staff describes the
guidelines.
The program will provide vehicle incentives statewide. However, a local air district may volunteer to administer the program within its own jurisdiction using these guidelines. Districts are also allowed to add to the $9,000 State grant.

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AIR POLLUTION SPECIALIST YEE: Moving on to the proposed guidelines.

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AIR POLLUTION SPECIALIST YEE: The proposed program guidelines are organized in the following manner: There is an introduction and then sections on program administration, eligibility criteria and incentive structure and a summary.

In the appendices are the administrative forms, a grant application and instructions. These are tools for the program manager. An initial list of eligible ZEVs is also included as an appendix. However, staff anticipates that the list will need to be updated several times in the early stages of program implementation as automakers decide to make ZEVs available to take advantage of this program's incentives.

Staff was assisted by an informal working group during the development of these proposed guidelines. The participants included the bill sponsor, ZEV proponents,
automakers and dealers, the administrators and local, regional and State agencies. The group met twice and provided review and comments on the earlier drafts of the guidelines. We were able to incorporate many of their suggestions in the proposed guidelines and appreciate their contributions.

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AIR POLLUTION SPECIALIST YEE: How will the program be administered? A program manager will be established to administer the program for ARB. The proposed guidelines specify that the ARB program manager will administer the statewide program. Where a local air district volunteers to administer the program within its jurisdiction, the ARB program manager will work closely with the district to ensure that its implementation of the program is in accordance with the guidelines.

The ARB program manager will work with the district to establish the mechanisms for transfer of State funds for payment of the grants approved by the district.

As mentioned previously, an informally working group assisted staff in developing these guidelines. Staff has proposed in the guidelines that such a working group be expanded and meet on a regular basis at least quarterly to ensure that the integration of State and locally available ZEV incentives is easy, transparent and
seamless to the consumers.

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AIR POLLUTION SPECIALIST YEE: How will the grants be obtained?

It's staff's intent that the program design will provide the consumer with a one-stop seamless shopping experience. As with the current vehicle incentive programs, the vehicle dealer will assist in the process. The dealer will begin filling in the application for a grant and will have the consumer complete and sign the application as part of the vehicle purchase or lease process.

The consumer then has two options for receiving the grant. We assume that most consumers will assign the grant to the vehicle dealer lessor to reduce the monthly lease payments that the consumer must make. However, the consumer is not required to sign the grant. In that case, there will be a higher, upfront vehicle cost to the consumer, but the cost will be defrayed by three equal annual grant payments sent directly to the consumer.

The consumer may also apply directly to the program manager to receive a grant retroactively. Staff is aware of six to eight ZEVs that have been leased as of October 1st, the effective date of this program. And these vehicles would be eligible to receive grants
AIR POLLUTION SPECIALIST YEE: The eligibility criteria section of the guidelines establishes the criteria for applicant eligibility and the criteria for vehicle eligibility.

AIR POLLUTION SPECIALIST YEE: The criteria for applicant eligibility are clearly laid out for this program in AB 2061. The bill lists individuals, local governments, State agencies, nonprofit organizations, and private businesses as qualified recipients. The bill does not, however, identify federal agencies as qualified recipients. Therefore, staff is proposing that federal agencies and entities such as the US Postal Service and military facilities would not qualify for its incentives through the program.

AIR POLLUTION SPECIALIST YEE: AB 2061 identified these criteria for vehicle eligibility. The vehicle must be a new zero emission light-duty car or truck capable of operation on the freeway, and it must meet all applicable safety standards. The ZEV must be purchased or leased between October 1, 2000 and December 31st, 2002 and be
registered with the Department of Motor Vehicles for use in California.

Staff will now discuss the first three criteria in more detail in the next few slides.

AIR POLLUTION SPECIALIST YEE: AB 2061 specifies that qualified recipients may receive grants for a new zero emission light-duty car or truck eligible for the program. ARB certifies zero emission vehicles in various categories, including passenger car, light-duty truck, motorcycle and medium and heavy-duty vehicles. For the purposes of this incentive program, only zero emission passenger cars or light-duty trucks certified by ARB will be eligible.

AB 2061 specifically allows the definition of a new ZEV to include previously leased vehicles that are upgraded substantially with new technologies, including advanced batteries and power electronics. The automaker will need to provide information specified in the guidelines to the ARB program manager.

Approval of such vehicles will be on a case-by-case basis. None have been approved to date, but a likely candidate is General Motors recalled EV1. It's upgraded with advanced lead acid or nickel metalhydride battery.
Staff is proposing that vehicles that are required by our Memorandum Of Agreement with the automakers be, as a matter of policy, ineligible for incentives through this program. MOA vehicles placed earlier received $5,000 in local incentives and such incentives remain available. Staff believes only a few MOA vehicles will fall under the exclusion.

Language in AB 2061 excludes motorcycles, medium- and heavy-duty vehicles, such as delivery vans and buses. Therefore these buses are not eligible for incentives from this program also.

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AIR POLLUTION SPECIALIST YEE: The ZEV manufacturer must establish that their vehicle meets the criterion that it is capable of operation on the freeway.

THE MANUFACTURER MUST ASSURE THE ARB program manager in writing that the vehicle has the ability to operate on the freeway in compliance with the California Vehicle Code. Neighborhood or low-speed vehicles limited by the vehicle code to roadways with speed limits of 35 miles per hour or lower clearly do not meet and are not eligible for incentives from this program.

Additionally, the ZEV would not be eligible if it is the manufacturer's recommendation to the consumer that the vehicle should not be operated or should have limited
AIR POLLUTION SPECIALIST YEE: Additionally, a vehicle must meet all applicable federal and State safety standards. The automakers will be required to provide appropriate documentation to the ARB program manager demonstrating that its ZEVs meet applicable federal motor vehicle safety standards, the FMVSS, and California Vehicle Codes.

Where the ZEV's are to be utilized solely for a demonstration project or are imported in limited numbers, manufacturers typically obtain waivers or exemptions to the FMVSS. In such cases, the automaker will need to submit copies of appropriate applications and approvals, if applicable, to the ARB program manager.

AIR POLLUTION SPECIALIST YEE: A variety of ZEVs will be eligible for incentives from this program. Shown here clockwise from the upper left corner is a two-seat passenger car, a five-seat van, a two-seat City EV and a light-duty truck.

AIR POLLUTION SPECIALIST YEE: The proposed guidelines describe the program's incentive structure. AB 2061 specifies that the maximum grant is 90 percent of the
ZEV's incremental cost over $1,000 up to a maximum of $9,000 per vehicle. The Energy Commission will provide incremental cost data to the ARB program manager. The incremental cost is defined by the bill as the reasonable difference between the cost of the ZEV and a comparable gasoline or diesel fuel vehicle.

This is the same definition that the Energy Commission utilizes for incremental costs.

Excuse me.

This is the --

CHAIRPERSON LLOYD: Take your time.

I realize being on camera is a bit of a strain.

(Laughter.)

ZEV IMPLEMENTATION SECTION MANAGER BEVAN: This is the same incremental cost --

CHAIRPERSON LLOYD: This is now Analisa Bevan taking over.

ZEV IMPLEMENTATION SECTION MANAGER BEVAN: This is the same definition that the Energy Commission utilizes for incremental costs that is used to calculate a lower vehicle license fee for alternative fueled vehicles, which includes ZEVs. Senate Bill 1782, which was sponsored by Senator Thompson allows for the ZEV license fee to be based on the cost of a comparable, conventionally fueled vehicle. For the vehicle license fee exemption, the
Energy Commission compares the Manufacturer's Suggested Retail Price, MSRP, for the ZEVs and comparable vehicles. They have determined incremental costs for ZEVs ranging from $11,000 to over $20,000. ZEVs with incremental costs in that range would be eligible in the program for the maximum grant, $9,000.

AIR POLLUTION SPECIALIST YEE: Thank you Analisa.

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AIR POLLUTION SPECIALIST YEE: Moving on to the next item in today's agenda, the issues remaining. During the working group meetings various stakeholders were able to share their experiences with the existing incentive programs and they made recommendations or brought forth issues for consideration by staff.

As mentioned earlier, AB 2061 excludes certain vehicles from being eligible for grants from this program. However, categories of excluded vehicles, such as zero emission motorcycles and neighborhood electric vehicles may provide air quality benefits. There are existing programs and we anticipate additional ones in the near term that provide incentives for these categories of vehicles.

Tax consequences are listed here as an issue only because this is not fully resolved. Public agencies do not pay taxes. However, some of the private consumers
accepting a grant may have tax consequences that will vary with the individual circumstances. The program's application and related materials inform grant recipients that there may be tax consequences associated with accepting the grant. The recipient is encouraged to consult with their tax preparer or a qualified tax consultant to avoid any surprises at the end of the year.

There are local ZEV incentives available in many areas of the State as previously mentioned. The proposed guidelines are intended to streamline the application and approval process for a grant and coordination with local incentive programs will create a seamless user-friendly incentive program for California's consumers.

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AIR POLLUTION SPECIALIST YEE: The various stakeholders also reviewed and provide comments on the proposed guidelines. Staff has considered the comments received and is recommending modifications to the proposed guidelines as Attachment B. These changes provide clarification or correct errors in language.

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AIR POLLUTION SPECIALIST YEE: The next slide identifies the schedule for implementing this ZEV incentive program. Staff will begin by holding an initial implementation meeting of the working group in the next
week or so. Staff will accept applications almost immediately. As mentioned earlier, staff is aware of several instances of ZEVs being leased since October 1. Staff will conduct outreach activities to promote awareness of the incentive program on an ongoing basis. And staff has targeted February 2001 to begin distribution of grants.

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AIR POLLUTION SPECIALIST YEE: Here we list planned outreach activities. Staff is in the process of developing outreach materials to distribute. The interested public will be directed to our zero emission vehicle web site or alternatively our toll free number 1-800-END-SMOG for our information on the program. If they have questions, they are provided with telephone and

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E-mail contacts to knowledgeable program staff. We intend to hold informational workshops for auto dealers. Staff will also continue to coordinate with managers of other incentive programs. Staff will meet quarterly with an expanded working group to resolve any issues that may come up during program implementation. We expect that the group will also be an excellent source for suggestions for additional outreach activities.

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AIR POLLUTION SPECIALIST YEE: To summarize, ZEV
incentives will help with the transition to the 2003 ZEV requirements. The proposed guidelines will be used by the ARB program manager and volunteer local air districts to implement a consistent program throughout the state and for the timely award of incentives.

The application process will occur primarily through the vehicle purchase or lease process that typically takes place at the auto dealer. Staff and stakeholders recognize that quick response to implementation issues and coordination with existing incentive programs is essential for an effective user-friendly program.

We would like to thank the stakeholders who assisted in developing these guidelines, the bill sponsors, ZEV proponents, automakers and dealers, fleet administrators, local air districts and regional and State agencies, including the Energy Commission, the Department of General Services, DMV and the CHP.

This concludes staff's presentation and we'd be happy to take any questions.

CHAIRPERSON LLOYD: Thank you very much. Do the Board Members have any questions?

Dr. Burke.

BOARD MEMBER BURKE: I'm not quite clear on what our role is in our outreach to people to educate them to
the availability of money. In my briefing from the staff, 
they did an excellent job in filling me in on the program, 
but I kept asking how do people who are not techees, who 
are not advocates of clean air, who are not friends of ARB 
or their local air districts find out about the program? 
And the discussion that was kind of stopped at 
the dealer, which I have a grave question about how much they'll do to educate the public in general.

CHAIRPERSON LLOYD: You have some experience in 
that area, I understand.

(Laughter.)

BOARD MEMBER BURKE: Yeah. So I was just hoping 
that we would have some -- and they said that there is an 
outreach program. I just think that it's important that 
we know about it and that it does go forward to those

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areas. I think we ought to concentrate on people who are 
extactly -- who would never think about owning an electric 
vehicle, because that's where the real education, I think 
needs to be.

CHAIRPERSON LLOYD: Comments from the staff?

ON-ROADS CONTROLS BRANCH CHIEF KITOWSKI: I'll 
start it. There's certainly no disagreement there. 
Outreach is going to be a key critical factor of what we 
are going to be doing in the future. And the outreach of 
this program is simply a small part of the larger outreach
package and the work that we need to do over the next couple of years. And I think you'll be seeing more of the larger outreach program for the ZEV requirement in January, but there's no dispute that outreach is a necessary component of zero emission vehicles.

And we actually, although the dealers and -- I understand the skepticism about the dealers. We actually do, though, look forward hopefully to partnering more extensively with dealers and automakers in the future as they really do need to ramp up to higher production levels in the future.

BOARD MEMBER BURKE: Can you tell me how Arizona was so successful in -- well, wait a minute, I'm --

(Laughter.)

BOARD MEMBER DeSAULNIER: Define success?

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(Laughter.)

BOARD MEMBER BURKE: I've only got six EVs in my garage from Arizona, so I'm looking for a couple more.

(Laughter.)

BOARD MEMBER BURKE: But you see, even, you know, everybody is not inclined to do those kind of things, so the word had to get out someway other than, you know, here's some free money, let's go down and get it.

(Laughter.)

BOARD MEMBER BURKE: I know that, you know, it
was a terrible situation, but maybe in that mess there's something that we can learn and utilize.

CHAIRPERSON LLOYD: I don't know whether --

BOARD MEMBER BURKE: Do you know how they marketed to the general public, was there government involvement or was it totally the dealers?

EXECUTIVE DIRECTOR KENNY: Dr. Burke, we can look at the Arizona experience and try to learn from it. I think one of the things that we probably can't copy with the Arizona experience is, to a certain extent what they ended up doing, was almost giving out free vehicles. It wasn't just simply subsidies on vehicles.

BOARD MEMBER BURKE: $221 million.

EXECUTIVE DIRECTOR KENNY: Yeah. And we're obviously not quite there.

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(Laughter.)

EXECUTIVE DIRECTOR KENNY: But we can look at essentially some of the techniques that they used to try to market to the public and see what might be advantageous here in California.

BOARD MEMBER BURKE: I understand because of the Arizona experience, Ferrari is not going to be looking to do an EV.

CHAIRPERSON LLOYD: Professor Friedman.

BOARD MEMBER HUGH FRIEDMAN: Well, we had talked
previously when we were discussing revisiting the mandate
about trying to develop an effective coalition of the
environmental organizations and others who are natural
supporters of the ZEV mandate and of getting these
vehicles placed and used and on the road, so that others
will see them and they can be given a fair test in the
public.

And it seems to me that with the reality of the
subsidy, as modest as it is, but perhaps with more to
come, hopefully, that we could enlist the support of the
long list of legitimate organizations, all of whom who
have members, and try and get them through their news
letters, through -- try and enlist their support in it,
and get it out, that there are these subsidies, and then
let people -- and whatever information we can help them
disseminate about how to go about accessing these
subsidies, the leases and all that.

EXECUTIVE DIRECTOR KENNY: You're right, we can
do that. And I think, actually, one of the things you're
probably going to hear in a few moments is from Dave
Modisette. And when he talks about, you know, what his
organization has been doing and really, quite honestly,
his efforts in Electric Transportation Coalition's efforts
were very instrumental in the bill getting passed.

And I think we will see a lot of effort to
essentially kind of partner with them, partner with the environmental organizations to make sure people are aware of what's happening and what opportunities are out there.

BOARD MEMBER BURKE: Obviously, my concern is in those areas where normally those kind of communications are not viable in the areas of where the environmentally challenged people are also economically challenged. So the natural assumption is because you're economically challenged, that you're not going to go out and buy an EV. And I don't think that that is necessarily so if you're properly educated, because those environmentally impacted communities need the most help.

And I think, quite honestly, my experience in the last seven years, is they're becoming more aware of the environment as a whole and they have an interest now,

where before it was like what, you know. But now there is an interest, so I think if we can encourage that and enhance that, I think we'll be serving the public interest.

CHAIRPERSON LLOYD: Supervisor DeSaulnier.

BOARD MEMBER DeSAULNIER: Somewhat along the lines of Professor Friedman, and, Mike, maybe you can respond to it, but in terms of this formula, I think is a good beginning, but with new money maybe we can be more proactive and be flexible, not so much just on subsidies
but looking at other money grants, sustainability, partnering with transit agencies around station cars and things like that. Maybe in a legislative -- now is a good time to do it, to start looking for an author who might be willing to carry that.

But I'm particularly interested in more flexibility, so we don't just get hooked to the subsidizing and the fine example of Arizona, because there are other ways I think, and also to blend funding around, particularly sustainability.

EXECUTIVE DIRECTOR KENNY: Actually, we will be looking at that. And one of the things that we actually had a whole lot of hopes for was kind of a transportation connection here. And what would occur is that maybe using station car concepts or using other types of electric vehicles in the context of transportation networks would actually provide a lot of value to a lot of people.

And what would occur then is instead of a car being associated with a person, the car would be associated with a community and there would be multiple users of that particular vehicle. And we are trying to figure out mechanisms that we could pursue to incentivize that.

BOARD MEMBER DeSAULNIER: And also around rental fleets, particularly at airports. I think those are
exciting possibilities. So while this is good, I don't think we should get locked into the formula. It might be good to really start to work on it now.

CHAIRPERSON LLOYD: Thank you.

Mr. McKinnon.

BOARD MEMBER McKINNON: Yeah. I understand this is one grant program in the whole, kind of, scheme of ZEVs. And maybe, you know, as we get into things and in the next couple of months, we can, you know, broadly nail down some of the issues.

The one thing I think is really important is if somebody is making a buy or lease decision on buying a ZEV, on getting a ZEV, is that there be a source. And I guess folks are working on a web page, and someone may want to talk about that, but a source of kind of seamless information, so you can get all the information on all of the subsidies available depending on where you live and then also so you can consider issues like installation of the charger at your house, so that a person kind of gets everything they need to make that decision and then know what they need to move through to do it. And I think it's real helpful to consumers. And it's certainly not mine. I think there's people way ahead of this. It just hasn't come up.

CHAIRPERSON LLOYD: Dr. Burke, Mr. Calhoun.
BOARD MEMBER BURKE: I'm sorry.

BOARD MEMBER CALHOUN: One of the things I notice in the staff report in there, no incentives would be offered for the neighborhood electric vehicles. Will you talk about the city electric vehicles, and I guess there is, sort of, a catch all there that would allow the staff to determine whether or not these vehicles can be operated on a freeway. Can you clarify that. I looked at the bill and I also looked at the staff report and it seems to me that there is some flexibility in there that allows the staff to make the determination as to whether or not the city electric vehicles can operate; is that correct?

ON-ROADS CONTROLS BRANCH CHIEF KITOWSKI: What the bill clearly says is the vehicle has to be freeway capable.

BOARD MEMBER CALHOUN: What does that mean?

ON-ROADS CONTROLS BRANCH CHIEF KITOWSKI: But it doesn't define what freeway capable is. By saying freeway capable, we feel it clearly takes away the neighborhood electric vehicles. When you look at city electric vehicles and you look at California requirements for being able to operate on the freeway, the basic requirement comes down to not impeding traffic. And so there aren't really -- the State laws on being able to operate on a freeway are rather vague and the city electric vehicles do
qualify.

Where we're, sort of, drawing the line at our proposal would be that we are -- there's a lot of incentive for the manufacturers, natural incentive, not to put a vehicle in situations that it would be dangerous, for liability reasons.

So we're feeling that the manufacturer will be responsible in assessing whether their vehicle is, in fact, freeway capable. And if they put any limitations on it with regard to their consumers, then they would be out of this program.

So if the manufacturer is fully saying that their vehicle is capable of operating on the freeway, and therefore they're accepting the liability associated, potential liability associated with that, we feel that's good enough for the program, and it does still comply with the State law that is on the books.

BOARD MEMBER CALHOUN: Let me tell you what my concern is. My vote at the September hearing was to support advancement of technology. And I would hate to see us take, what I call, sort of, a catch-all approach just to comply with a regulation. And I certainly don't want to see us offer a lot of incentives to something that isn't going to take us where we want to be about 20 years from now.
Bob Cross mentioned at the workshop that he thought we ought to be looking down the road, where do we want this program to be 20 years from now. And I think that it's certainly consistent with my views. And I think that we ought to be looking at something that's going to force technology, and maybe I'm taking a preemptive strike here relative to what's happening in January, but I just have trouble with having golf carts getting incentives, for certainly you can go buy those today.

EXECUTIVE DIRECTOR KENNY: If I might, we don't think that the low-speed vehicles or the neighborhood electric vehicles will get any incentives.

BOARD MEMBER CALHOUN: And I think what we're --

EXECUTIVE DIRECTOR KENNY: We don't think they will receive any incentives under the proposal that we're making today. Well, actually what Mr. Cackette is saying is that they will not. I'm actually saying I don't think they will. And the reason I'm saying that is a low-speed vehicle would not be able to be freeway capable. And so what ends up happening there is that because it is not freeway capable it cannot meet one of the criteria that is essential for it to receive an incentive.

MOBILE SOURCE CONTROL DIVISION CHIEF CROSS: There's a minimum speed limit on the freeways. And I think it's 45. It's gone up. It used to be 45.
(Laughter.)

EXECUTIVE DIRECTOR KENNY: Let me go one step further, which is essentially if you take --

BOARD MEMBER WILLIAM FRIEDMAN: I think it's 80.

(Laughter.)

EXECUTIVE DIRECTOR KENNY: It's 80, so we're safe. I think the real key here, because essentially what Mr. Kitowski was talking about, which is that you cannot impede traffic when you're on the freeway, otherwise you're operating illegally. And the difficulty to a low-speed vehicle with a top speed of 35 miles an hour will impede traffic on a freeway.

And consequently, it will not be freeway capable, and consequently it will not be eligible for dollars.

BOARD MEMBER CALHOUN: It would impede traffic on some of the surface streets also, I just thought about it.

I think other thing, Mr. Calhoun, is that, you know, we are looking at the issue of neighborhood electric vehicles and we are trying to address that in the staff proposal that will be released tomorrow with regard to the ZEV Program for your consideration next month. And we have actually taken a lot of these very issues into consideration in terms of that staff proposal.

And the beauty you espoused a moment ago about looking down the road, where do we want to be in the
future, that is exactly the kind of thinking that we are involved in.

CHAIRPERSON LLOYD: Mr. Kenny, dealing with vehicles, again, we know we've got a couple of letters here vis-a-vis the sparrow. Now, my understanding is that this is prohibited under the regulation, because it's classified more as a motorcycle, am I correct on that?

EXECUTIVE DIRECTOR KENNY: You're correct. It is classified as a motorcycle and we were not proposing funding for motorcycles under the program.

CHAIRPERSON LLOYD: So we're prevented by the law from doing that.

EXECUTIVE DIRECTOR KENNY: Yes.

CHAIRPERSON LLOYD: Thank you.

Mr. McKinnon.

BOARD MEMBER McKINNON: In that you raised that, I look forward to thinking of some way to include motorcycles and vehicles like the sparrow. I, however, agree that the law doesn't provide that. It's not only something like a motorcycle, it's single passenger. And I think the law looks pretty clear on that.

But, you know, maybe we can legislate some approach to motorcycles and smaller vehicles like that, because the sparrow certainly will get commuters to work and back with zero emissions and so that is something we
should look towards.

CHAIRPERSON LLOYD: And Mr. Cross, I think --

MOBILE SOURCE CONTROL DIVISION CHIEF CROSS: I had an extended conversation with our attorney and she assures me that there is no speed limit anymore, minimum speed limit.

I recall a sign, so I don't know maybe the law changed. But I think that the point remains that a vehicle which is designed for places that are speed limited to 35 doesn't meet the test of having a minimum speed, which is freeway safe.

In other words, if someone were traveling at 35 miles an hour on a freeway on one of the Los Angeles freeways they'd get a ticket for obstructing traffic.

Variation that if -- and my recollection was that if not the absolute law, the guidance that the CHP used to use was 45, but that was in a world with a speed limit of 55.

So I'm saying that, as far as I can see, there's no way that a neighborhood vehicle would qualify as a freeway-capable vehicle.

CHAIRPERSON LLOYD: Thank you.

Dr. Burke.

BOARD MEMBER BURKE: They're lucky if they get a ticket in Los Angeles, you know, it's a drive-by shooting, you know, you get one between the eyes.
But I just wanted to go back --

BOARD MEMBER RIORDAN: So you don't want to drive slow, do you.

BOARD MEMBER BURKE: Mr. McKinnon's comment about the Internet. There was a special on 20/20 last week, which indicated that they were doing a comparison of all the Internet car shopping, what do you call them, sites on the Internet, and it's now so that you can go in and compare every automobile at one time with one scroll, and that means cost, insurance costs and those kind of things. I think it's very important that we be in touch with those web sites and make sure that with the grant program that our -- that the vehicles which are going to be offered in California be highlighted in their comparison studies.

EXECUTIVE DIRECTOR KENNY: We can do that. That's a good idea, because what we can do is contact the site and let them know that these subsidies are available so that when people are scrolling down, they see that. In fact, not only is the vehicle available but there's a subsidy available with it, so we'll follow up on that.

CHAIRPERSON LLOYD: Any other comments from the Board?

With that, we have two witnesses signed up. And so I'd like to ask them to come forward. We have Dr.
Good morning.

DR. LIU: Good morning, Dr. Lloyd, Members of The Board.

The South Coast AQMD is interested in administering the ZEV incentive program in our area and will continue to support the deployment of zero emission vehicles. The South Coast Mobile Source Air Pollution Reduction Review Committee, the MSRThat has been a pioneer in establishing buy-down incentive programs for zero emission vehicles and developing infrastructure in our area.

With the ongoing cooperation of all interested parties including participation in ARB's quarterly working group meetings, we hope the effort will result in a coordinated and efficient program that will minimize the administrative costs.

We have the following three comments on the ARB staff proposal. First, in the interest of maximizing incentives for qualifying vehicles, the South Coast AQMD supports the determination of incremental costs based on vehicle manufacturers suggested retail prices, as proposed by the ARB in Appendix That of the guidelines dated November 28, 2000.
Second, although funding allocation to local air districts is not fully described in the proposed guidelines, the South Coast AQMD would support an approach of population-based allocations in the beginning to air districts with the ability to redistribute unused funding to areas with greater demonstrated demand for that, because we have a large population and really bad air quality. Also, we have a very well established infrastructure so if there's any unused funds, we'd like to have a mechanism to very really pull it to our direction.

Third, while the South Coast staff believes that the ZEV incentive program will help reduce the short-term incremental costs of zero emission vehicles, we're relying heavily on the automakers and the strength of ARB requirements to ensure that full-function zero emission vehicles are made available. We will be glad to work with ARB to make sure that those vehicles will be available. I think that's a major issue on our mind, because it's questionable.

Thank you.

CHAIRPERSON LLOYD: What part of that is questionable, Chung?

DR. LIU: We don't know how soon or how fast those vehicles can be made really available in the market.
and we don't have that kind of assurance from the OEMs.

BOARD MEMBER CALHOUN: When you speak of the vehicle, you're talking about full-functioning electric vehicles?

DR. LIU: Yes.

CHAIRPERSON LLOYD: I'm sure we'll hear more about that on January 25th.

DR. LIU: Right. And for the next two years, at this time, if you go out to purchase EVs, it's not that easy. And so how soon those vehicles will be -- how soon they're going to start to produce again, we really have to work on.

CHAIRPERSON LLOYD: We certainly have an interest in that as well as in working with you, so any help we can get, we'd be delighted to accept that.

DR. LIU: Thank you.

CHAIRPERSON LLOYD: Comments from the Board?

Dr. Burke.

BOARD MEMBER BURKE: I have to admit, I'm confused. The grant that ARB is giving and the grant that we at South Coast give through MSRThat that one added on top of each other, or can you get both of those or do you just get one of those?

ON-ROADS CONTROLS BRANCH CHIEF KITOWSKI: If I may. You could get both of those yes. They are
independent grants. And when we talked about having a
seamless operation, that is part of the seamless
operation. We want to make sure people have the most
up-to-date information. The $9,000 grant will be
available statewide. And the local districts may continue
the current grant operations that they have.

BOARD MEMBER BURKE: We're currently at $5,000?
ON-ROADS CONTROLS BRANCH CHIEF KITOWSKI: Yes.
BOARD MEMBER BURKE: So it could be $14,000 if
someone --

DR. LIU: The bill does not preclude to have that
out. But our understanding is MRSC --

BOARD MEMBER BURKE: If you applied that to the
lease, has anybody figured out how much a car would be on
the lease? I hear Arizona creeping up on me here.

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(Laughter.)

CHAIRPERSON LLOYD: Dr. Burke, I think next
speakers probably will be addressing that.

BOARD MEMBER BURKE: Okay, fine. Thank you.
CHAIRPERSON LLOYD: Thank you Chung.

Dave Modisette.

MR. MODISSETTE: Yes. Thank you, Chairman Lloyd
and Members of the Board. I'm Dave Modisette. I'm
Director of the California Electric Transportation
Coalition. Our organization was one of the co-sponsors of
the legislation, Assembly Bill 2061. The other co-sponsor was the Steven And Michelle Kirsch Foundation. And the Kirsch Foundation was not able to send a representative today, but my comments reflect the views of both organizations.

We first want to thank --

CHAIRPERSON LLOYD: Please. No, he can't --

BOARD MEMBER BURKE: Sorry.

MR. MODISETTE: We first want to thank the ARB staff for their hard work and thoughtfulness in developing the guidelines. The purpose of AB 2061 was to make the price of a full-service zero emission vehicle comparable to that of a conventionally fueled vehicle. And we are pleased to see that in the introduction to the proposed guidelines the goal is repeated as the purpose for the program.

And with that purpose in mind, I guess it is important that you understand that the incentives provided under AB 2061 were designed to be complementary to the existing and planned incentives provided by other State agencies and local air districts.

In other words, AB 2061 was not designed as a replacement for other State and local incentives. If it were, we could not achieve our stated purpose, and, in fact, we may have achieved very little in terms of
additional benefit to consumers.

Let me briefly illustrate this point from the consumer point of view with the two-page chart that's been handed out. There's three columns on the chart. It lists incentives before passage of AB 2061. The next column lists the impact to the consumer when you take the existing incentives, plus the incentives provided by AB 2061 and then the last column would be if other State and local agencies were to terminate their incentive program so that the only incentive provided to consumers would be that under AB 2061.

And you can see that before passage of AB 2061, the current incentives, which is the incentive that's been described, its a $5,000 incentive. Half of that money is provided by the California Energy Commission and other half is provided by the local air district with the exception of the South Coast that provides the full $5,000 incentive.

The impact of that on the consumer is about $150 reduction in the lease price, three-year lease price. So you can see what I've listed here as a typical monthly lease price without any incentives is $650, which just as a footnote our organization believes is very, very high. And we've always encouraged automakers to use pricing techniques to try to pull that down. We think that they
can do that, they have the power to do that and they should do that.

But nevertheless, you begin with that $650 monthly lease price, you take off the $150 a month that is provided by the current incentive and you end up with a monthly lease price of about $500, and that's frankly what people are paying today, you know a little more for some vehicles, a little less for some vehicles.

And we really think that is too high for the average person. That's not competitive in the world of lease prices. So then in the next column you can see what the impact of AB 2061 was. And our goal was really to cut that $500 lease price in half, and that's exactly what the bill does. It translates into about a $250 reduction in the lease price, so that the lease price to the consumer for the vehicle is now only $250 a month, which we believe is the point when you begin to reach price parody with conventional vehicles.

Now, if it turns out that the Energy Commission and local air districts withdraw their incentive programs at some time during the period of this legislation, the third column illustrates what will happen, and that is the benefit to the consumer would be $250, so that the lease price would go down to $400, still a significant benefit, but really not where we wanted to be.
Now, on the second page, you know, just to make the situation worse, I guess, is if there is a ruling from the IRS that the grants provided under the program constitute taxable income, then a large portion of this grant is going to go away to the federal government and even to the State government, and the impact of that is going to be to greatly reduce the incentive value to the consumer.

So on the second page, I illustrate that impact under a scenario where the IRS finds that this is taxable income. And can you see in the last two columns, if that's the case, the incentive provided by AB 2061 alone, that is without the Energy Commission or air district incentive will be $150 only, the lease price will go down to $500.

Well, that's exactly what it is today under the current Energy Commission and air district program, so we won't have made any headway at all if the other agencies withdraw their incentive programs. If they keep their incentive programs, however, even with tax implication, even with the taxation of the grant program, we can still bring that lease price down to about $350, which is not as low as we had hoped, but we believe is in the ballpark of what a consumer would pay for a comparable vehicle.

So my purpose in explaining this to you today is
to really encourage you to meet with the Commissioners at
the California Energy Commission, to meet with the Board
members of the major urban air districts, to persuade them
to continue their existing incentive programs through the
life of this program and that would include the Energy
Commission's new efficient vehicle incentive program,
which they received $5 million for in the budget and which
is currently under design at the Commission.

We also want to encourage you to work with
automobile manufacturers to encourage them to establish
purchase and lease prices for ZEVs that, after accounting
for incentives, are comparable to conventional vehicle
prices in the marketplace. As part of that effort, you
may want to review the results of past actions by the
Mobile Source Air Pollution Reduction Committee to

establish a maximum MSRP and a maximum monthly lease price
as a condition of eligibility for existing ZEV incentives.

Lastly, we believe it is critically important
that all incentive programs be closely coordinated, so
that that prospective ZEV owners don't have to deal with
multiple agencies and multiple applications to obtain the
benefits of ZEV incentives.

Ideally, there would be a single source of
information for all ZEV incentives, and a single
coordinated application process. We are extremely pleased
that the proposed guidelines have adopted this as a goal and have proposed formation of a working group to accomplish this.

So, in conclusion, the California Electric Transportation Coalition and the Kirsch Foundation urge adoption of the guideline document before you with a recognition that there is more work that needs to be done with our sister agencies and other stakeholders to get maximum benefits from this program.

Thank you.

CHAIRPERSON LLOYD: Thank you very much, Dave. Any comments, questions from the Board?

Yes, Ms. D'Adamo.

I would like to thank you, by the way, you and the Kirsch Foundation for all your efforts, and successful efforts, too.

Thank you.

BOARD MEMBER D'ADAMO: I'm just wondering, a question of the witness or of staff, are there any other options as to how we could structure it so that we could get around the taxable income issue?

GENERAL COUNSEL WALSH: We have consulted with both the federal and state taxing agency. And the advice that we've gotten, as a general rule, these grants would be taxable income to the recipients. There may be
individual taxpayers whose circumstances may dictate a different result. But we were not able to come up with anything that would allow us to structure it in a different way, for example, in terms of how the money was paid out to the dealers as opposed directly to the recipients that would have affected the taxability of the grant.

BOARD MEMBER D’ADAMO: What is different about AB 2061 and the existing incentives that are out there such that the existing incentives apparently there are no taxable income issues, correct, what's different about the two program structures?

GENERAL COUNSEL WALSH: I don't know that there are no taxable issues with respect to those programs.

MR. MODISSETTE: This is actually a difficult issue or a gray area. Under the existing program the $5,000 grant from the Energy Commission and the air districts goes directly to the vehicle manufacturer, and the vehicle manufacturer then reduces the capital cost of the vehicle and passes that benefit through to the consumer in terms of reduced lease payment.

Now, a number of the automakers believe and believe very strongly that because of this structure, there is no tax implication either to them, because they received the grant, or to the consumer. They believe, you
know, they are providing the same kind of rebates that
they provide for other vehicles. They're reducing the
cost of a product that the consumer is buying and
therefore there is no tax implication either to them or to
the consumer.

The only difference with the program is that
there is an option here for the consumer to receive the
funds directly, that is, a check would go from the Air
Resources Board or the State of California directly to the
consumer. And some people believe that that option means
that there is a tax effect, which apparently, you know, I
don't know, may apply, I'm not an attorney, may apply even
in a situation where the consumer elects to pass that
forward to the vehicle manufacturer.

BOARD MEMBER D'ADAMO: Because the option exists

MR. MODISETTE: That's one of the things that
we're investigating.

GENERAL COUNSEL WALSH: Right, but in this case
the bill is written so that the dollars do, in fact, go to
the recipient dealer directly or indirectly through the
dealer as opposed to going to the manufacturer.

BOARD MEMBER D'ADAMO: Is staff researching the
issue or --

GENERAL COUNSEL WALSH: Yes.
BOARD MEMBER D'ADAMO: Could we hear back when you do resolve that?

GENERAL COUNSEL WALSH: Yes.

STAFF COUNSEL DAVIS: If I may comment for the benefit of the court reporter and the Board members, I'm Victoria Davis. I'm staff counsel who's been assigned to the program and I'm the person who actually spoke to someone at the IRS. And I was told that there are options for us to request determinations in writing of varying levels of formality and bindingness. And we may, in fact, be limited by our options with how the bill is already written. But if we do request a determination, it may offer guidance should we seek future legislation for future similar programs.

Also, it was pointed out to me, especially since these grants will not be issued till next year, any tax consequences won't have to be dealt with concretely until after the end of the year. So we may be able to get information and have accurate information to pass along to the consumers within a few months. It's not completely within our control certainly.

BOARD MEMBER D'ADAMO: Mr. Chairman. I'd like to suggest that in your discussion with the IRS if they have a recommendation or if you learn that, perhaps, the legislation could be modified, we may want to pursue a
support of a cleanup bill in order to resolve the issue.

CHAIRPERSON LLOYD: Good point.

Dr. Burke.

BOARD MEMBER BURKE: That is exactly what I was getting ready to say. And then in addition we may also want to contact the California delegation, Congressional delegation, and see if, in fact, there may not be a waiver for it under something that they can find.

CHAIRPERSON LLOYD: Professor Friedman.

BOARD MEMBER HUGH FRIEDMAN: I think we do have a responsibility to clarify the taxability of these grants or anything that's deemed taxable income and received by anyone who's acquiring one of these vehicles. I also think that while we're at it, we might want to consider that to the extent they're using them for business use or other deductible purposes. I mean that could offset partially or entirely the tax consequences.

STAFF COUNSEL DAVIS: Yes. Although, you have, in fact, identified one of the problems in our attempting to provide advice, and I'm not a tax attorney and I don't play one at board meetings, and because each applicant's tax picture will be different, we may not be able to give conclusive advice. We can give general advice and repeat what the IRS has told us once they tell us something.

BOARD MEMBER HUGH FRIEDMAN: Oh, no you can only
give the kind of general analysis or overview that is
given in, for example, in an investment prospectus, the
taxability of the investment. It's very general and it
always ends by saying consult your -- ultimately, it
depends on the particular individual. No question of
that.

STAFF COUNSEL DAVIS: And we will continue to do
that.

CHAIRPERSON LLOYD: Mr. McKinnon.

MR. MODISSETTE: I should just add that the author
of the legislation, Assemblyman Alan Lowenthal, has also
offered the services of legislative counsel to work with
ARB legal staff to try to resolve the issue.

CHAIRPERSON LLOYD: Mr. McKinnon.

BOARD MEMBER McKINNON: Yeah. One of the things

that concerns me with the whole ZEV thing is when we get
into an uncertainty, uncertainty, you know, kind of
hinders the movement. And I guess I'm really inclined to
suggest that -- I don't know, you sponsored the
legislation, I take it. Do you have any strong objections
to kind of doing a legislative fix to it, you know, sooner
than later?

MR. MODISSETTE: If this is, in fact, a way to get
around the, you know, the tax liability issue, then, no, I
don't have a problem at all, and I think that would be a
good thing to do. But when we drafted the legislation, it
actually wasn't clear to us that there wasn't a tax
implication even with the existing grant program. And we
actually thought, at that time, that what was happening
was that consumers didn't even realize that the State of
California or these air districts were offering incentives
at all.

They just, you know, they got the monthly lease
price from the, you know, from the manufacturer. They had
no idea that there was a $5,000 contribution that was
coming to them. And we thought well, gosh, wouldn't it be
a more powerful incentive if we could actually send
consumers a check for $3,000 every year in each of the
three years the leased a vehicle. Wouldn't that be a more
powerful incentive for consumers, and maybe as a side

benefit actually put some downward price pressure on these
lease prices that are coming from automakers. So that was
the thinking at the time.

I think it does appear now with greater certainty
that the existing structure where consumers don't have a
choice does allow you to get around those tax
consequences. And if that's the case, then I guess we
would certainly support a change to the legislation.

CHAIRPERSON LLOYD: Professor Friedman.

BOARD MEMBER HUGH FRIEDMAN: Just as a follow up,
to the extent that we may be supporting efforts to see a further subsidy in next year's budget, I think it is important that we clarify how it should be structured to minimize or eliminate any tax consequences that we don't wish.

CHAIRPERSON LLOYD: Okay, very good point.

Thank you very much. We do have one additional witness here, Tom Addison from the Bay Area AQMD.

MR. ADDISON: Good morning, Chairman Lloyd and members. My name is Tom Addison. I'm with the Bay Area Air Quality Management District. And I'm here today to convey our support for the staff guidelines that are before you for implementing AB 2061.

I think that your staff has worked well to come up with guidelines in a rapid time frame. And we needed that, because the bill took effect not that long ago, and so I think that your staff has done a very good job of putting these guidelines together in a process of consultation with all the affected parties, including local districts like ours, and putting the guidelines together rapidly.

We were supporters of this legislation last year. We certainly appreciate the efforts of the previous speaker, the $18-million-dollar-man, Dave Modisette, who, I think was influential in the good news to us all. And
I'd like to say that specifically on the guidelines that your staff have put together, I think there are three things that we agree with quite strongly that are in these guidelines.

The first is the first-come first-served allocation for the incentives, and that is, we thought, implicit in the legislation. That's certainly implicit in the guidelines and we think that's the right way to go and we appreciate that direction.

The second is the use of the Manufacturers Suggested Retail Price for the incremental cost calculation. We think that is also the appropriate thing to do, and support the guidelines on that point.

We also think that the issue of allowing the incentive money to flow through the manufacturer or through the consumer, we hope that that helps with the tax liability issue that you've just been discussing. We're certainly hopeful that the issue will be resolved either with a favorable IRS ruling or some sort of clean-up legislation. But I think giving those two choices, hopefully helps with that.

So in conclusion, we certainly agree there are some open issues, but we think those open issues are not with the guidelines that are before you. And we think that the process that is being laid out here for
consultation with all the parties including local districts, the Energy Commission and the manufacturers is a good one. And I'm here today to let you know that the Bay Area Air District will be happy to work with your staff in the upcoming months in putting together a program that is as effective as it can be to try to get these vehicles out there and into the hands of the public.

CHAIRPERSON LLOYD: Thank you very much, Tom.

Thank you for your support.

Any other comments from the Board, questions? Mr. Kenny, do you have any further comments?

EXECUTIVE DIRECTOR KENNY: No.

CHAIRPERSON LLOYD: Since this is not a regulatory item, it is not necessary to officially close the record although we do have a resolution before the Board, so do I have a motion in favor.

BOARD MEMBER HUGH FRIEDMAN: So moved.

BOARD MEMBER DeSAULNIER: Second.

CHAIRPERSON LLOYD: All in favor say aye?

(Ayes.)

CHAIRPERSON LLOYD: Thank you very much.

Thank you.

We'll take a few minutes break before we move on to the next agenda item, which is 00-12-3, Proposed Amendments to the Certification Standard for Light- and
Medium-duty Vehicles.

(Thereupon a brief recess was taken.)

CHAIRPERSON LLOYD: Can we continue with the next item.

Next item on today's agenda is 00-12-3, proposed amendments to the certification standards for light- and medium-duty vehicles and the alignment of California's heavy-duty gasoline standards with the more stringent federal standards.

We often boast in California that we are the leaders of the pack, that no one has more health protective standards in the entire world. Generally speaking, that's absolutely true. But occasionally the federal government gets just a tiny bit ahead of us on certain regulations. When that happens, we need to catch up quickly, so that the most protective standard will apply. That is the purpose of today's agenda item.

At this point, I'd like to turn it over to Mr. Kenny to introduce the staff presentation.

EXECUTIVE DIRECTOR KENNY: Thank you, Mr. Chairman and Members of the Board. In 1998, the Board adopted the second phase of the Low Emission Vehicle Program, called LEV 2 to extend the original LEV program through 2010 while expanding the benefits provided by the program. This was accomplished by increasing the
stringency of the light- and medium-duty emission standards and by further reducing the allowable average emissions from each manufacturer's fleet for 2004 through 2010.

A noteworthy element of the program that contributes to its success is a requirement that the increasingly popular sport utility vehicles and pickup trucks be subject to the LEV 2 passenger car exhaust emission standards by the 2007 model year.

Subsequent to adoption of the LEV 2 program, ARB assisted the US EPA staff in developing a similar program for federal vehicles that would achieve significant emission reductions for vehicles in other states. This federal program is called the Tier 2 program.

While the federal Tier 2 program was modeled after California's LEV 2 program, structural differences between the federal and California programs could, in some unusual circumstances, result in higher emitting vehicles being sold in California than some of the federal counterparts.

Today's staff proposal would change the LEV 2 regulations to say that a manufacturer may not certify a California vehicle model to California standards that are less stringent than its federal counterpart. We believe that the proposal will ensure that California continues to
receive the cleanest cars and trucks in the world.

The second part of today's staff proposal, reduces the emissions of ozone precursors from heavy-duty auto cycle engines by 60 percent within the 2003/2008 timeframe. Heavy-duty auto cycle engines are used in gasoline vehicles with a gross vehicle weight of over 14,000 pounds.

The emission reductions are achieved for these engines by aligning California's exhaust emission standards for hydrocarbon plus oxides of nitrogen, or HC plus NOx, with those recently promulgated by the US EPA. Reductions in HThat plus NOx from engines used in medium-duty vehicles, between 8,500 and 14,000 pounds gross vehicle weight, are similarly reduced.

What I'd like to now do is turn the presentation over to Sarah Carter and we'll go from there.

Sarah.

(Thereupon an overhead presentation was presented as follows.)

AIR RESOURCES ENGINEER CARTER: Thank you, Mike.

Good morning Chairman Lloyd and members of the Board. Today I will be presenting staff's proposal for acquiring certain federal Tier 2 vehicles to certify in California and adoption of new federal exhaust emission standards for heavy-duty gasoline engines.
AIR RESOURCES ENGINEER CARTER: In 1990, the Air Resources Board adopted the low emission vehicle or, LEV 1 program, which significantly reduces exhaust emissions from the light- and medium-duty vehicle fleet between 1994 and 2003. Both the LEV 1 regulations and the second phase of these regulations, LEV 2, adopted in November 1998, include three primary elements.

The first element consists of tiers of exhaust emission standards for increasingly more stringent categories of low emission vehicles.

The second is a mechanism requiring each manufacturer to phase in a progressively cleaner mix of vehicles from year to year with the option of credit banking and trading.

And the third is a requirement that a specified percentage of passenger cars in light- or light-duty trucks be ZEV's, vehicles with no emissions.

AIR RESOURCES ENGINEER CARTER: The LEV 2 program continues to reduce emissions from the new vehicle fleet between 2004 and 2010. A major focus of the LEV 2 program is to reduce the emissions from the largest sport utility vehicles and pickup trucks that are being used primarily for personal transportation by requiring them to meet the
same emission standards as passenger cars.

LEV 2 also lowers the emission standards for all vehicle categories.

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AIR RESOURCES ENGINEER CARTER: These are the emission standards for passenger cars under LEV 2. The benefits of these new standards compared with LEV 1 range from 75 percent reduction in NOx emissions from passenger cars to a 90 percent reduction in NOx emissions from the largest sport utility vehicles and trucks. The LEV 2 program also establishes a near zero super ultra low emission vehicle or SULEV emission category.

The transitional low emission vehicle or TLEV category is dropped for LEV 2. Elimination of the TLEV category will likely preclude the use of diesels in noncommercial vehicles in California for the foreseeable future.

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AIR RESOURCES ENGINEER CARTER: While the LEV 2 program emphasizes NOx reductions, the nonmethane organic gas, or NMOG, fleet average requirements also continue to decrease. As a result, NMOG emissions from new light-duty vehicles will be reduced by about half between 2003 and 2010.

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Subsequent to the adoption of the LEV 2 program, ARB staff assisted the US EPA in developing a similar program for federal vehicles that would achieve maximum emission reductions for vehicles in other states.

ARB staff met with US EPA staff to review the engineering approach taken in our test program, provide them with emission test data, loan them experimental catalysts, and provide other assistance.

US EPA staff demonstrated that emission levels adopted in LEV 2 could also be achieved cost effectively on vehicles nationwide. The program that was subsequently adopted by the US EPA is referred to as the Tier 2 program.

While Tier 2 is patterned after the LEV 2 program, it contains some unique features and program elements that differ from the California program. These include setting an NOx fleet average requirement rather than an NMOG fleet average requirement as in California. This was done primarily to allow diesel sport utility vehicles and pickup trucks to emit at higher emission levels than passenger vehicles so they could continue to be sold.

Tier 2 requires that their emissions be offset by lower emissions from other vehicles. The need to offset
high diesel vehicle emissions may result in manufacturers reducing the emissions from some federal Tier 2 vehicles ahead of the schedule required by LEV 2.

Since diesels are not provided special standards in California manufacturers would not otherwise need to sell the cleaner vehicles here.

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AIR RESOURCES ENGINEER CARTER: Other provisions of the federal Tier 2 program include a six-year phase-in of new evaporative emission standards between 2004 and 2009 versus a three-year phase-in between 2004 and 2006 of California's program. The California program also has more stringent evaporative standards including a zero evaporative emission provision. The Tier 2 program also does not contain a ZEV requirement.

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

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AIR RESOURCES ENGINEER CARTER: Under the California LEV 2 program, both passenger cars and sport utility vehicles are required to meet the same stringent 0.07 gram per mile NOx emission standard beginning in 2007. Under the Tier 2 program, the fleet average NOx emissions from these vehicles would also have to be 0.07 gram per mile.

However, Tier 2 allows sport utility vehicles and pickup trucks to certify as high as .2 grams per mile NOx
or about three times higher than in California. These higher emissions must be offset by producing enough cars at a much lower NOx level such that the manufacturers federal fleet average NOx requirement of 0.07 grams per mile is met.

What staff is proposing today is to take advantage of any cleaner passenger cars produced under Tier 2 and require them to be sold in California as well, which means that California gets both the cleanest cars and the cleanest sport utility vehicles and pickup trucks.

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AIR RESOURCES ENGINEER CARTER: Today's proposal would change the LEV 2 regulations to require that beginning with the 2004 model year, a manufacturer may not certify a California vehicle to a less stringent standard than its federal counterpart. Any such federal vehicles would also be required to comply with California evaporative, on-board diagnostic or OBD II, warranty and label requirements, all of which are more stringent than the federal requirements.

However, consistent with lead time requirements of the federal Clean Air Act, which manufacturers are subject to outside of California, the largest sport utility vehicles and trucks would be allowed to comply with the federal evaporative and OBD requirements prior to
AIR RESOURCES ENGINEER CARTER: In cases where a vehicle model is certified to federal emission standards that are identical to California standards, the manufacturer must certify that model to the California emission standards. A federal vehicle model certified to Tier 2 standards that do not correspond to a California emission category would be counted as certified to the next highest California standard based on a comparison of HThat plus NOx for the purpose of determining compliance with NMOG fleet average requirements, calculating vehicle emission credits and compliance with phase-in requirements.

AIR RESOURCES ENGINEER CARTER: I will now discuss staff's proposal for heavy-duty auto cycle engines. These are typically gasoline engines used in vehicles over 8,500 pounds gross vehicle weight.

AIR RESOURCES ENGINEER CARTER: On July 31st, 2000, the US EPA adopted new regulations to reduce nonmethane hydrocarbon or NMHC and NOx emissions from heavy-duty gasoline engines. These regulations were developed through a
cooperative effort between ARB and US EPA as the result of
a 1994 settlement agreement with the environmental groups.
While current California regulations are more stringent
than the previous federal standard, California would also
benefit from the new requirements.

Staff is therefore proposing to harmonize
California's regulations with the more stringent emission
standards recently adopted for federally certified
engines. These new standards would apply to heavy-duty
gasoline engines used in vehicles greater than 8,500
pounds gross vehicle weight.

Staff's proposal would reduce NMHC plus NOx
emissions from California heavy-duty gasoline engines by
about 60 percent. It will provide an NMHC plus NOx
emission benefit of one ton per day. The federal rule
also provides two other compliance options in addition to
the primary one shown here. These compliance options
allow a manufacturer to select the best approach for its
product line.

Option 3 has been designated as the primary
standard at one gram per brake horsepower hour and
scheduled for introduction with the 2005 model year.
The other two options allow manufacturers to
delay compliance with the standard until the 2008 model
year by certifying to an interim emission level of 1.5
gram per brake horsepower hour prior to 2005. Staff is proposing adoption of all of these options to allow manufacturers that chose to certify to Options 1 or 2 federally to do the same for California.

AIR RESOURCES ENGINEER CARTER: To summarize, staff's proposal will help achieve California's goal of clean air by ensuring that vehicles sold in California are the cleanest available. This can be accomplished by requiring that vehicles sold in California are at least as clean as the federal Tier 2 counterparts and by aligning California's exhaust emission standards of heavy-duty gasoline engines with the more stringent federal standards.

The proposal will also help the ARB to meet its commitment under the settlement agreement with the environmental groups.

For these reasons, staff recommends the Board adopt the proposal including the 15-day changes available at the back table.

Thank you.

CHAIRPERSON LLOYD: Thank you very much. Do I understand from that that we get the best of all worlds as to the lowest NOx and the lowest NMHThat

DEPUTY EXECUTIVE OFFICER CACKETTE: Yes.
CHAIRPERSON LLOYD: Madam Ombudsman, will you please describe the public participation process that occurred while this item was being developed and share any concerns you may have on the process with the Board at this time.

OMBUDSMAN TSHOGL: I'd be glad to. Mr. Chairman and members of the Board, ARB staff held a workshop on November 15th of this year to allow industry the opportunity to comment on the proposed regulation before you now. Notification of this workshop was sent to 500 people, of which 30 attended the meeting.

Staff felt that one workshop was sufficient, since the proposed amendment, as you just heard, adopts emission standards that automakers will be required to meet nationally anyway. Staff incorporated many of the comments they received into the proposal. On October 10th staff mailed the notice for the public hearing to 500 people. The staff report became available and was mailed to 500 people on October 20th.

Thank you.

CHAIRPERSON LLOYD: Thank you. Do board members have any questions, comments?

Mrs. Riordan?

BOARD MEMBER RIORDAN: Mr. Chairman, I will just wait until Mr. Kenny is finished. I wanted to lend my
voice of support for the item, because it seems to me to be a win-win for everybody here in California.

CHAIRPERSON LLOYD: Any other comments from the Board?

Again, I think it's quite remarkable when we look at those numbers there to see how far we've come. And clearly while the industry may not like the push there, but their response out there, their ability to reach those extremely low numbers, is just remarkable when you look back with that progress in time.

So, Mr. Kenny, do you have any further comments?

EXECUTIVE DIRECTOR KENNY: No, I don't.

CHAIRPERSON LLOYD: I will now close the record on this agenda item. However, the record will be reopened when the 15-day notice of public availability is issued.
Just a reminder to board members, if there's any ex parte discussions on the particular item? Seeing none, we'll move ahead and I will -- if the Board has reviewed the resolution.

BOARD MEMBER RIORDAN: I'd like to move the resolution. Oh, excuse me, sorry.

BOARD MEMBER MCKINNON: I'll be happy to move resolution 00-45.

BOARD MEMBER RIORDAN: I'll second it.

CHAIRPERSON LLOYD: All in favor say aye?

(Ayes.)

CHAIRPERSON LLOYD: It's unanimous.

Well, thank you all very much and it brings us, actually, faster than I thought to lunch. So we're going to take a break now, for one hour, so at 1:00 o'clock we will start back and begin the final item of the day, which is the school bus item.

EXECUTIVE DIRECTOR KENNY: We have a lot of witnesses.

CHAIRPERSON LLOYD: Apparently we have a lot of witnesses so it's going to be a long afternoon or evening.

(Thereupon a lunch break was taken.)
CHAIRPERSON LLOYD: If people could take their seats so we can start the afternoon, please.

The next item time on our agenda today is 00-12-2 proposed guidelines for the lower-emission school bus program.

As everyone now knows, Governor Davis provides $50 million in ARB's 2000/2001 budget to replace older, high-polluting school buses, with newer cleaner models and to retrofit an additional segment of the existing school
bus fleet with particulate trap filters.
The $50 million lower-emission school bus program is consistent with the Governor's continuing emphasis on education and on reducing health risks to school children. The need for financial assistance in the area is tremendous. And this is just a start of what we need to do. Public schools clearly need the State's help to clean up their fleets or there wouldn't be so many old buses still out there, actually about 6,000 to 6,600 pre-1987 school buses.
Fifty million dollars won't solve the entire problem either, but at least it's a good start and the initiative of the Governor is just tremendous. And, in fact, we appreciate very much his willingness to fund the effort. It's a really major step forward for all of us and particularly for the children and their health.

I have some additional comments. I will save those till later. Mr. Kenny, would you please begin the presentation of this item to the Board.

EXECUTIVE DIRECTOR KENNY: Thank you, Mr. Chairman and members of the Board. There are two components to the $50 million lower-emission school bus program. Staff has proposed $40 million for the purchase of new buses and infrastructure and $10 million to put particulate filters on older buses.
Under this program, we expect to replace about 400 high polluting pre-1987 buses and to put particulate filters on about 1,500 older, in-use buses.

For the bus replacement part of the program, we are proposing that of the $40 million allocated $25 million be used for new alternative fuel buses and infrastructure and that $15 million be used for lower-emission diesel buses. We heard from numerous school districts that they wanted a choice between diesel and alternative fuels. Staff's proposal gives them both options.

We also heard from school districts that replacing pre-1977 buses should be a priority, since those buses were manufactured prior to federal safety standards. Staff's proposal requires that school districts that receive funding must replace their pre-1977 buses first.

Improved air quality, reduced exposure to toxic diesel particulates and safer school transportation would be the immediate results of this program.

The ten million dollars for school bus retrofits is the first major step we are taking under the comprehensive diesel risk management program the Board adopted in September. This is an important opportunity to move the Board's diesel retrofit objectives forward. The element of the school bus program also accounts for the
largest reduction in particulate matter. It's extremely
cost effective.

The guidelines we are proposing to you today will
advance technology in several areas. First, it will
demonstrate the efficiency and durability of particulate
traps in California school buses. You will hear from
staff about the South Coast Air Quality Management
Districts and ARB's joint efforts to demonstrate
particulate filters on school buses and to test and
certify the systems. We have set a high standard for the
retrofits funded by this program.

Second, it will expand the use of low sulfur
diesel fuel. As you know, the US EPA has proposed to
require low sulfur diesel fuel nationwide beginning in
2006. School districts that elect to buy lower emission
diesel buses or to install the retrofit devices on their
existing diesel fleet will get early benefits from using
low sulfur diesel fuel.

I think the program is a win-win proposal for
children's health, for California's schools and for air
quality. And with that, I'd like to turn it over to
Roberta Hughan to make the staff presentation.

Roberta.

(Thereupon an overhead presentation was
presented as follows.)
AIR POLLUTION SPECIALIST HUGHAN: Good afternoon.

Today's presentation will consist of, first, an introduction to the program, and a listing of the goals that are being recommended. Then I will go on to an overview of the program and a description of the two components of the staff proposal. Lastly, a discussion of issues that have been identified will be followed by staff conclusions and recommendations.

First, the introduction and the goals recommended for the program. Last year, Governor Davis provided $50 million in the State budget to reduce emissions from diesel school buses.

This is consistent with his efforts to improve education in California and reduce health risks for students, including these funds in the fiscal year 2000/2001 State budget. This was supported by environmental and health organizations, school district organizations, State legislators and many others.

ARB's staff developed the proposed guidelines. We are presenting them to you today for your consideration. The staff's goal is to put together a very positive balanced program that will provide emission
benefits, reduce toxic exposure and provide safer school transportation. We propose doing that by funding the purchase of new, cleaner, safer buses and cleaning up in-use buses.

In an effort to do that right, we have consulted with numerous stakeholders, primarily school districts, and we have benefited significantly from insight into the funding and operation of school districts' transportation services. We also consulted with environmental groups, engine, bus and retrofit device manufacturers and other interested parties.

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AIR POLLUTION SPECIALIST HUGHAN: A number of goals for the school bus program were identified. The first one is to benefit children's health. That can be done in two ways. First, by reducing the criteria of pollutants, oxides of nitrogen or NOx and particulate matter or PM. This would improve the quality of the ambient area that children breathe.

Second, reduction of PM would reduce children's exposure to localized toxic diesel particulates when they're waiting for or riding the bus. The goal of providing safer school transportation can be accomplished by replacing old buses with new buses meeting current safety standards.
In 1998, the ARB identified diesel engine particulates as a toxic air contaminant. Last September the Board adopted the ARB's Risk Reduction Plan for diesel fueled engines and vehicles. The plan calls for the PM retrofit of all diesel engines technically feasible by 2010. This includes school buses. So our goal is to make this proposal consistent with that plan.

Also, engine and retrofit technology can be advanced by accelerating development of PM retrofit devices meeting stringent reduction standards and by furthering development of diesel engines that meet NOx and PM standards lower than ARB mandatory requirements.

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AIR POLLUTION SPECIALIST HUGHAN: Bottom line, the goal is to get school buses like this either off the road or retrofitted with smoke filters.

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AIR POLLUTION SPECIALIST HUGHAN: The ARB staff is proposing that the $50 million for the program be used to fund two components, $40 million would be used to fund part one, the Lower Emission School Bus Replacement and Infrastructure Program. Ten million dollars would be used to fund part two, the School Bus Particulate Matter Retrofit Program.

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AIR POLLUTION SPECIALIST HUGHAN: The California

Energy Commission or that would administer the new bus
program with oversight by ARB. With the concurrence of
the That some larger air districts could administer the
program in their geographic areas. Funding awards would
be made through a noncompetitive process based on
applications submitted by school districts.

The PM retrofit program would be administered by
those air districts that choose to participate, again,
with oversight by ARB. This would also be a
noncompetitive award process. A schedule for expenditures
of these funds has been set. After guidelines are
approved, the application forms would go out to the school
districts, the amount of awards determined and orders for
buses and retrofit devices would be placed. We want to

get the cleaner buses on the road as soon as possible.

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AIR POLLUTION SPECIALIST HUGHAN: First, I will
describe Part 1, the proposed School Bus Replacement and
Infrastructure Program.

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AIR POLLUTION SPECIALIST HUGHAN: There are over
24,000 school buses of all types operating in California.
About 6,600 are pre-1987 model buses, including about
1,900 pre-1977 buses. All pre-1987 buses were
manufactured before more stringent NOx engine standards went into effect and before any PM standards were in place. In addition, the school districts place a high priority on replacement of pre-1977 buses as they were built before federal safety standards went into effect.

Lower emitting buses are now available and school districts are eager to get buses that are both cleaner and safer. However, school transportation services must be subsidized by school district general funds. Those services must compete for both capital and operating costs with mandated school districts services.

There are a few grant programs that are helping out the school districts with some new buses. They include the Small School Districts Program administered by the California Department of Education that funds 25 to 50 buses a year. As well, some school districts have secured air quality incentive funds from local air districts through a competitive program. Primarily the air districts pay the incremental cost of alternative fuel buses.

Unfortunately, this is not adequate co-funding for many school districts. Additional funds are needed to retire the old buses and Governor Davis has provided some of those funds.
AIR POLLUTION SPECIALIST HUGHAN: ARB staff is proposing that specific amounts of funding be allocated to ten geographic areas. These amounts would be fixed, regardless of whether the That or an area air district administered the funds. The remaining monies would be put in a pool by the That for distribution throughout the rest of the State.

In the proposal to get a new bus, the school districts would have to contribute 25 percent of the cost of a new bus with a maximum of $25,000. This would make the money go further. School districts could use local air district funds or other local grant funds, if available, to help pay the school district's share.

Assuming that most school districts will want full-size buses, staff estimates that about 400 buses could be funded with the $40 million.

AIR POLLUTION SPECIALIST HUGHAN: You can see here the amounts allocated to the school districts within the geographic areas of the ten largest air districts based on population. There is almost $3 million in the pool for the remaining districts. The number of buses is based on an average contribution of $100,000 per bus, including infrastructure.
AIR POLLUTION SPECIALIST HUGHAN: Criteria for the program is proposed. Only public schools and groups of school districts that form coalitions through Joint Powers Agreements, JPA's, would be eligible to receive these funds.

School districts could apply for funding for any buses that have heavy-duty engines. The buses could operate on any fuel except gasoline, if the engine meets the Applicable emission standards. Both the NOx and PM standards set for the new buses are lower than current mandatory standards.

Alternative fuel buses would have to certify to two and a half grams per brake horsepower hour NOx and .03 grams PM. Diesel engines would have to certify to three grams NOx and .01 grams PM.

School districts would be required to retire a pre-1987 diesel or gasoline bus for each new bus received. Any pre-1977 diesel buses in a given fleet would have to be replaced first. Those buses would have to be crushed. Retired 1977 to '86 model year buses would have to be crushed or replace an older bus in a California fleet.

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AIR POLLUTION SPECIALIST HUGHAN: There is $40 million recommended for new bus purchases. In the proposal, $25 million has been designated for the purchase
of lower emission alternative fuel buses, natural gas, propane, electric and others. Natural gas and propane engines are already certified to ARB's optional two and a half gram NOx standard or lower.

PM emissions are low for the life of the buses. Electric buses have inherently low emissions. Up to two and a half million or ten percent could be used for infrastructure, fueling or charging stations for alternative fuel buses.

The school districts would have to demonstrate a need for any new infrastructure. It is proposed that $15 million go to purchase lower emission diesel buses. As yet, no diesel engines have been certified to the proposed three gram NOx federal remission limit. One manufacturer, who offers what they call a green diesel school bus,

states its diesel engines could certify the intermediate level. Low sulfur diesel fuel would be a requirement. Both types of engines emit about the same level of PM.

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AIR POLLUTION SPECIALIST HUGHAN: Staff did a comparative analysis. CNG buses cost more than diesel buses. Per dollar spent more diesel buses can be purchased, as you can see on the chart. The chart shows the relative emission benefits of natural gas buses and diesel buses based on certification levels. So you can
see that more reductions of NOx and particulates would occur if both the lower emission alternative and diesel fuel buses were permitted into the program. School districts have expressed a preference for a choice of fuels. Some districts are committed to CNG. Other districts, particularly where using natural gas is problematic, have requested the flexibility to choose diesel buses to meet their needs.

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AIR POLLUTION SPECIALIST HUGHAN: The ARB staff estimates that the proposed school bus replacement program would reduce NOx emissions by 1010 tons and PM emissions by the 90 tons in the years 2001 to 2016. The estimate is based on the ARBs emission inventory, MFACT 2000 and assumes the bus travels 225,000 miles in its lifetime.

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AIR POLLUTION SPECIALIST HUGHAN: That concludes the description of part one of the $40 million new bus program. Now we will move on to Part 2, the description of the proposed $10 million school bus PM retrofit program.

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AIR POLLUTION SPECIALIST HUGHAN: In September, the Board approved a plan to reduce exposure to diesel particulate emissions. A key to the plan is the retrofit
of heavy-duty diesel fleets in California with particulate
filtering devices. The proposal supports that effort.

Diesel particulate filters are easily installed,
off-the-shelf technology, generally designed as a muffler
replacement for an in-line catalytic converter. The
filters provide immediate and cost-effective emission
reductions, cutting exhaust particulates by 85 percent or
more.

By providing funds for retrofits, the program can
achieve substantially greater PM reduction than a program
that funds only new bus purchases. The filters have
proven successful in numerous applications, particularly
in Europe, and the increased availability of low sulfur
diesel fuel in California provides an opportunity for
widespread use here as well.

The transit bus regulation, adopted by the Board
in February, requires particulate filter installation in
many diesel transit bus fleets by the end of 2002.

AIR POLLUTION SPECIALIST HUGHAN: Staff is
working with several manufacturers who have applied for
ARB certification of diesel particulate filters. The
certification process requires an 85 percent conversion
efficiency. It also requires a complete demonstration of
durability and effectiveness. It requires manufacturers
to warrant their retrofit devices for 150,000 miles for emission effectiveness and for 100,000 miles for mechanical performance.

ARB staff is confident that PM filters will provide significant reductions while remaining durable and effective. The process will be completed before funds are expended under the program. Also underway is a cooperative effort between ARB, the South Coast Air District and several school districts to validate the long-term durability and effectiveness of the filters in various school bus applications. That demonstration program is now ongoing in the Los Angeles region and is expected to be completed by mid-2001.

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AIR POLLUTION SPECIALIST HUGHAN: The proposed PM retrofit program would use $10 dollars to purchase and install particulate filters in about 1,500 in-use school busses. This includes contributing money for the incremental cost of low sulfur diesel fuel, estimated at .5 cents per gallon for five years. No school district match would be required for the retrofit program.

The air districts would apply to ARB for funding. Staff proposes that funds be allocated by population. The five largest air districts would received fixed allocations. Because funds are limited, staff proposes
that remaining funds be pooled. The total funds available
to a district in the pool would depend on the number of
districts applying for funds.

AIR POLLUTION SPECIALIST HUGHAN: You can see
here the amounts allocated to the five largest air
districts based on population. There is about one and a
half million in the pool for the remaining districts. The
number of buses shown retrofitted is based on about $6,000
per retrofit, plus $500 towards the incremental cost of
low sulfur diesel fuel.

AIR POLLUTION SPECIALIST HUGHAN: Staff proposes
broad eligibility guidelines for the retrofit program.
California public school districts and Joint Powers

Authorities would be eligible. Private contractors that
provide transportation for public schools would also be
eligible for the retrofit program. To help ensure cost
effectiveness and availability of manufacturers' support
and training, we propose the program focus initially on
larger fleets.

And we're working with the air districts to
assure that. All 1977 and newer model year in-use diesel
powered buses qualify for retrofits provided there is a
certified retrofit device available for each engine.
Finally, it's critical that retrofitted buses use only low sulfur diesel fuel. In fact, we would like all buses in a yard with retrofitted buses to use low sulfur fuel to avoid potential misfueling that could result in filter damage. We note that even buses that are not retrofitted will emit less PM when run on low sulfur diesel fuel.

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AIR POLLUTION SPECIALIST HUGHAN: Staff estimates that the retrofit program will eliminate 113 tons of particulates from school bus exhaust over the next ten years benefiting school children, bus drivers, teachers and the neighbors where these 1,500 buses operate. Public health will also benefit from reductions in reactive organic gases and carbon monoxide. Some of the devices have the potential to reduce NOx as well, reducing formation of ozone and PM 10 in urban areas.

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AIR POLLUTION SPECIALIST HUGHAN: In our work with stakeholders several issues were identified. However, that issue needs to be listed here as well. To reiterate, the school districts requested a choice of
fuels. You saw the chart comparing the benefits dollar for dollar of including both diesel and alternative fuel buses in the program. And that showed that including diesel buses means more buses purchased and greater NOx and PM reductions.

There’s another aspect to that debate. The South Coast Air District Board has adopted a series of fleet rules that require public agencies to purchase, primarily, alternative fuel vehicles. A school bus rule has not been adopted but is currently being workshopped. Some South Coast representatives have expressed interest in using their full new bus allocation to fund only alternative fuel school buses.

If this is allowed, the That would work with other stakeholders to ensure the proposed diesel alternative fuel funding split is maintained statewide.

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AIR POLLUTION SPECIALIST HUGHAN: On the funding allocation issue, many school districts have told us they would prefer the allocations to the geographic areas or in the pool to be based solely or partially on the number of pre-1977 buses in these areas. Staff is proposing that the allocation be based on population. There are equity issues here.

Most of the money would go to those areas where
these funds are raised. Also, if the allocations were not based on population, those school districts that have used their own funds or excess grant funds to replace their oldest buses, would lose out.

As well, many school districts have told us they would prefer that only pre-1977 buses be eligible for replacement. That is because there were no federal safety standards prior to 1977. The proposal does require that pre-1977 buses, in any given fleet, be retired first.

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AIR POLLUTION SPECIALIST HUGHAN: Staff is proposing eligible replacement buses include all pre-1987 buses. That's because prior to 1987, PM emissions were not controlled. There were no PM engine emission standards in effect. Also, prior to 1987, NOx emission standards were less stringent, so pre-1977 and 1977 to 1986 model year engines are equally dirty.

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AIR POLLUTION SPECIALIST HUGHAN: The staff is proposing a 25 percent with a maximum of $25,000 match funding requirement for the school districts for the purchase of new buses. During guideline development, some school districts opposed the requirement. However, program funding is limited. Requests for funds will certainly far exceed availability. A required funding
match means more buses could be purchased and air quality
benefits increased.

ARB staff believes that the proposed 75 percent
funding level up to about $100,000 per bus plus CNG
fueling infrastructure will assure full school district
participation.

School districts are encouraged to try to secure
match funding from other sources such as local air
district's funds and federal grant funds. Another issue
is the cost of low sulfur diesel fuel. This is required
to assure the effectiveness and durability of Green Diesel
engines and PM retrofit devices. ARB staff estimates that
the incremental cost to produce the fuel is three to five
cents a gallon, and proposes to contribute $500 per
retrofitted bus.

This would pay for up to five years of
incremental fuel costs. However, in rural areas or with
small volume orders, the retail cost could be more.
School districts are advised to verify that cost with
their fuel suppliers. It may be possible for them to form
consortiums with other school districts, transit agencies
or other agencies in order to get volume prices.

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AIR POLLUTION SPECIALIST HUGHAN: And last
staff's conclusions and recommendations. ARB staff
believes that the program is outlined and the proposed
guidelines would have a number of beneficial results. By
both replacing old buses and cleaning up in-use buses, a
balance has been achieved.

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AIR POLLUTION SPECIALIST HUGHAN: First,
children's health would benefit. By reducing NOx and PM,
ambient air quality would improve, smog would be reduced.
Second, children would be less exposed to toxic diesel
exhaust. Air pollution has been linked to a range of
serious health problems. Children, with their growing
lungs and faster respiratory rates, are particularly
affected.

Second, safer school transportation would result.
The new school buses would meet more stringent safety

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stands than older buses. Additionally, technology
would be advanced through the accelerated development of
highly effective particulate filters and the early
development of lower emission diesel engines. This is an
encouraging beginning. Still there are many more old
buses to be replaced. A successful and timely program
will get us off to a good start.

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AIR POLLUTION SPECIALIST HUGHAN: Under staff's
proposal, this is one of the new shiny clean buses that
would be eligible for funding. This is a natural gas bus.

There about 700 of these buses in use in California. No smoke here, plus NOx reductions.

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AIR POLLUTION SPECIALIST HUGHAN: And this is a demonstration of a Green Diesel school bus, that would be eligible for funding upon certification. No smoke here either, plus NOx reductions.

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AIR POLLUTION SPECIALIST HUGHAN: Finally, the staff recommends approval of the proposed lower emission school bus program guidelines.

Thank you.

CHAIRPERSON LLOYD: Thank you. Do the Board members have any questions?
And consequently, with a limited pool of money, we could not address the entire 24,000 school bus fleet in the State. And so we were trying to figure out how we could maximize the value to the school districts, to the environmental benefit, to safety, to advancements in technology and to commingled sulfur diesel fuel into the market place. The thought was essentially that we need to ensure that, in fact, we continue the competition between all the technologies, the CNG, the clean diesel and the traps. And so we wanted to essentially spread money across all three categories. We were also trying to do it in a way in which the emissions benefits could be maximized.

And we thought essentially by going with the pool of $25 million for CNG and then another $25 million pool for diesel as a total, we had a split there and we created the competition between the technologies. We then subdivided the diesel pool into two with the new buses and with the retrofit buses. And the idea there was essentially to ensure that, in fact, we continue to pool the new diesel technology forward and that we also have sufficient money available to put money into traps, because we do see significant advantages both from a
technology advancement standpoint and also from a health standpoint in terms of the emission reductions that traps give you.

So the rationale was to essentially try to split it up evenly, to split it up fairly, to provide competition among the different fuels, to try to continue the development of the technologies, to pull the low sulfur diesel fuel in and to put as many new buses on the streets as we possibly could.

BOARD MEMBER DeSAULNIER: In terms of the, particularly, the NOx standards, I mean do you view that as truly being fuel neutral?

EXECUTIVE DIRECTOR KENNY: Yes. And the main reason we consider that is that if you look at the two -- looking at the new bus side, the CNG actually has a lower NOx standard. It has a 2.5 grams per brake horsepower hour and the clean diesel has a three gram standard. At the same time, what we were trying to do is look at the context of everything, of the overall smog benefits that we would get. We do get more diesel buses than we would get CNG buses. And so consequently, because we get more diesel buses, even though we have a little dirtier standard, and what ends up happening is that the overall benefit is actually better, really, if you go on to the combination of diesels with the retrofits. At the same
time, what we were trying to do is look at the PM side.

The PM, the ThatNG is not essentially meeting the same
level of standard as the diesels are meeting. And we are
trying to look at the practice from a balanced standpoint,
where there's both a NOx benefit and there is a PM benefit
and we want to maximize both those benefits.

BOARD MEMBER DeSAULNIER: And I'll play a little
bit unfair here. Hypothetically, if you had more than one
year, say if you had multiple years, would this look any
different, do you think?

EXECUTIVE DIRECTOR KENNY: I think it potentially
does. I mean, I think one of the things that we're
looking at right now is a very interesting situation in
which we are in a one-year scenario. We are going to see
cleaner diesel engines really in about 18 months that are
down in the two and a half gram levels or lower
potentially. And so I think then what ends up happening,
potentially is that we look at setting one standard that
reflects both low NOx and low PM.

Right now the difficulty for us is that one of
the technologies has the lower NOx number, the other
technology has the lower PM number and we are trying to
balance that.

BOARD MEMBER DeSAULNIER: And just one last
question. Mike, when we did the duel path transit bus
rule, that I had Hamlet-like reservations about, it was always my assumption that the clean diesel would be more towards the truck fleet and we would be moving in the fleet, particularly the transit fleet, which we would be trying to get more incentives for alternative fuels. Would you explain, to me at least, sort of how we're evolving from that?

EXECUTIVE OFFICER KENNY: What we were trying to do is recognize that the technology has been advancing fairly rapidly on the diesel side and we think that is advantageous. And the main reason for that is what happens is that we can take that technology as it evolves and we can essentially transfer across the entire diesel fleet.

We do recognize the benefits of CNG, which is why here what we tried to do is essentially give it the largest portion of the pie, if you looked at it in terms of three segments. And we thought that was actually valuable in terms of continuing the incentives and getting the buses out there that are CNG. We were also, though, taking into account the fact that from an emission reductions standpoint, we got a better emissions reduction return by having the clean diesel vehicles out there, because they were cheaper to purchase and then using the retrofits.
BOARD MEMBER DeSAULNIER: I'm sorry. I have one last question, Mr. Chairman. I promise this is the last one. I won't kiss any babies after that either.

(Laughter.)

BOARD MEMBER DeSAULNIER: But just in terms of, we've talked about it before and maybe I'm a little overly sensitive to it, but the potential capacity of problems for product, and always a challenge for request for variances. I mean, how does that play in here? It seems like there's going to be plenty of market for car certified clean diesel fuel in the future, and we're trying to add more, as we talked about in the ZEV mandate. It seems like, in my mind, that gives us more of a motivation to try to create more alt fuels vehicles out there in general in the whole fleet.

What I'm getting at is, and I'm a little bit surprised by the vehemence by some of the -- well, for instance from WSPA. That in my mind, at least, there seems like there's a big market for clean diesel out there and there will continue to be. As we look at trucks in particular, that's where that market will continue to grow.

So if that's true, isn't there some motivation, particularly from the That maybe I'm trying to be an Energy Commissioner, to promote alternative fuels in this
instance rather than clean diesel?

EXECUTIVE DIRECTOR KENNY: I think the answer would be yes. And I think the "tried to do" is that we have basically tried to make it fairly clear that the largest portion of the pie was a CNG portion. We were trying to essentially promote the CNGs out there.

The difficulty that we were running into is that from an emissions benefit standpoint, we don't get the same level of health protection if we were to put the greatest chunk of the money into CNG. And so what we were trying to do is balance that desire to provide for diversity of fuels, with the equally important desire of essentially reducing the health benefit that the kids are suffering.

And so the combination was, essentially, in a way, kind of our way of splitting the baby up in a way that gave us kind of the best return, we thought, on the number of buses, the fuel and the fuel diversity issues.

BOARD MEMBER DeSAULNIER: Thank you, King Solomon.

(Laughter.)

CHAIRPERSON LLOYD: Before you actually bestow that on him, I would like a correction --

(Laughter.)

BOARD MEMBER DeSAULNIER: I don't know if I have
that authority.

(Laughter.)

CHAIRPERSON LLOYD: I think King Solomon got a slight of hand. I do not understand why you said natural gas has got the lion's share, when, in fact, I think we're 50/50, but maybe that's a lawyers definition. I'm looking at a scientists definition.

EXECUTIVE DIRECTOR KENNY: Actually, you are correct. It is a 50/50 split in terms of the total pool, but what I was actually referring to was if you look at the new vehicle pool, what we did there to the pool is larger for CNG.

BOARD MEMBER DeSAULNIER: That's what my emphasis was on.

CHAIRPERSON LLOYD: Professor Friedman.

Wait a minute, maybe Mr. McKinnon will second this.

BOARD MEMBER McKINNON: Yeah, King Solomon, I came at it from a very different perspective. I mean, I started out thinking we ought to do a lot of retrofit and try to affect as many kids as possible when we did it. And I also understand, you know, a lot of the other factors. I mean, we are trying to move cleaning up diesel. And so I appreciate the difficulty in doing the split. I think from my perspective, it probably came out
stronger for ThatNG than I would like. So part of what you were dealing with is a board that has different ideas here about how it ought to be done.

But I'm going to set that aside, because there's a whole bunch of people I'm sure that have ideas that we should hear about that issue.

One thing I'm kind of interested in is that once the split is done, say for instance retrofit, if we do retrofit carefully, such as we're doing right now, we have some of the large districts working with retrofit, and we figure out the configurations of the buses and make sure that there's kind of an efficient setup to do retrofit, rather than kind of just handing everybody money and saying go give it a try. It may take us some time.

And let's say, for example, it takes us a good bit of time to get that done, and in the meantime we are fortunate enough to get another year, another two years or whatever allocated to doing this project, can we, after the fact, move around this money? For instance, if retrofit money is not getting spent, then can we shift money to CNG or shift money to new diesel and take care of the retrofit next year or something like that?

EXECUTIVE DIRECTOR KENNY: Actually, right now it's not set up that way. It is set up essentially as kind of three pots. What we would do is if we ran into
that particular circumstance, we would bring it back
before you.

BOARD MEMBER McKINNON: That's it. Thanks.

CHAIRPERSON LLOYD: Professor Friedman.

BOARD MEMBER HUGH FRIEDMAN: I just want to ask
some questions and get answers. I'll save my comments
until I've heard all the testimony. But I do have a few
questions that I'd appreciate staff clarification on.

First of all, just picking up from Mr. McKinnon,
at least one piece of correspondence indicated the
understanding that the traps are not now available and
won't be until 2002 or later. Is that true, that is the
particular traps are not available and therefore the money
ought to go for something else now.

DEPUTY EXECUTIVE OFFICER CACKETTE: No, I think

the traps are available now. We're putting them on
demonstration school buses right at this time. They are
not a development product, but they are not a product that
has, you know, widespread commercial experience yet. So
there is, you know, some difference in time here, but the
basic product is available and we think that particularly
when we finish the demonstration program, that they'll be

BOARD MEMBER HUGH FRIEDMAN: Okay. Another
question is is there anything in the enabling legislation
that provides the pool of money that limits us to
replacement buses as opposed to allocating some of it for
retrofits. There's a number of pieces of correspondence
which seem to indicate the assumption, and if it's a
misapprehension, I'd like to know it, that we really can't
retrofit. What we've got to do is replace, that was the
Governor's intent if that's how they understood it.

GENERAL COUNSEL WALSH: No. We do not believe
that the language that created the program would limit us
to replacements, that we can do the retrofit program.

BOARD MEMBER HUGH FRIEDMAN: And alternative
fuels includes cleaner diesel as opposed to -- the
alternative being what we now have, is that right, or is
the only definition or meaning of alternative something
other than gasoline and diesel.

EXECUTIVE DIRECTOR KENNY: Well, I think
historically, when people have talked about alternative
fuels, they have been looking at essentially propane, CNG,
liquid propane, things like that.

BOARD MEMBER HUGH FRIEDMAN: So, again, is there
anything that limits allocating funds to something other
than natural gas or liquid propane?

EXECUTIVE DIRECTOR KENNY: We don't believe so.

GENERAL COUNSEL WALSH: No.

BOARD MEMBER HUGH FRIEDMAN: I assumed that
that's why you made the proposal, but I wanted to clarify, because I see a lot of that raised in the literature.
The allocation gives priority to replacing pre-77 units, because they are the most polluting, although, apparently, the pre-87 are equally polluting, but you begin with the oldest and then work up.

Is it the case that particularly in rural areas, that there are a lot of older buses that would need replacing where they don't have the infrastructure, and it wouldn't be economically feasible to establish infrastructure for CNG or for -- at least for CNG.

EXECUTIVE DIRECTOR KENNY: There are school districts that are like that and they may have very small numbers of buses. They may even be single bus fleets. And they do not believe that it would be economically feasible for them to go to the CNG because of the infrastructure costs, and so they are the types of districts that have actually been at least mentioning very specifically that they would prefer to have the option.

BOARD MEMBER HUGH FRIEDMAN: Arguing for the diesel, the dual path.

EXECUTIVE DIRECTOR KENNY: Yes.

BOARD MEMBER HUGH FRIEDMAN: Has Green Diesel even been certified?

EXECUTIVE DIRECTOR KENNY: The bus itself has not
yet been certified. And in fact, what we are asking the
Board to do is look at the three gram NOx .01 gram PM and
establish that as a standard. And if the bus was not
certified to meet those numbers, then it could not receive
any funding.

BOARD MEMBER HUGH FRIEDMAN: And how about in-use
as opposed to certification. I guess there is some
information to support the argument that certified
standards aren't in-use standards.

DEPUTY EXECUTIVE OFFICER CACKETTE: Well, in the
case with the particulate filter on the bus, we've
actually tested it on many other in-use cycles or tested
the whole bus rather than just the engine. And it
maintains its performance pretty much regardless of the
way it's driven. So in-use we expect it to be similar

reductions to what we see from the certification values.
And we also don't expect that there will be any
in-use problems, like failures. If there is a failure, I
think you'd be able to know it right away from the back
pressure or lack thereof on the trap.

MOBILE SOURCE CONTROL DIVISION CHIEF CROSS: I
might add that fuel -- in-use deterioration is not a fuel
issue. In other words, it's an engine issue, so it's
going to happen whether it's a natural gas bus or a diesel
bus. I think the filters of the kinds of devices you
could put on an engine to clean them up, the filters, are one of the more reliable ones, if you will, in terms of being able to identify a problem with it.

BOARD MEMBER HUGH FRIEDMAN: Do we know yet the extent to which there are any significant differences in the toxicity, the elements that make it toxic, or the degree of toxicity in the emissions comparatively with natural gas and with the new Green Diesel?

EXECUTIVE DIRECTOR KENNY: Actually what we have been doing is using PM as basically a surrogate for the toxicity. And as we reduce the PM, we presume that, in fact, we are reducing the toxicity. When we are looking at these two fuels in the two buses, we are then looking at the PM numbers and using those PM numbers as, kind of, a surrogate for what kind of toxic numbers we're getting out of these particular buses.

We believe that, in fact, that's a reasonable way to go about it, and we believe that when you look at a .03 on the CNG and a .01 on the diesel, that we are reducing the toxicity levels down to low levels.

Actually, one other question -- actually, one other answer, I guess, I'd like to ask is -- or I'd like to answer in addition was, Mr. Cackette just informed me that as we look basically back at how the money may be distributed, if, in fact, there was any undistributed
money, is essentially the proposal does have it as a
reallocation by staff, that I think what we would prefer
to do in that situation is bring it back to you.

BOARD MEMBER HUGH FRIEDMAN: And just the final
question, if I may, and it really again keys off of
Supervisor DeSaulnier’s question, if we were able to get
similar funding next year to keep it going, this program
going of replacing and/or retrofitting, would this, if you
knew now if you had another X million, would this proposal
be any different?

EXECUTIVE DIRECTOR KENNY: If we had basically
the exact same factual situation then as we have now I
think the proposal would be identical. I think the thing
that would potentially change the proposal, assuming more
money in the future, is that we may have a different set

of factual circumstances which may modify what we would
propose to you.

BOARD MEMBER HUGH FRIEDMAN: And you’d have more
experience with both Green Diesel and with retrofits as
well.

EXECUTIVE DIRECTOR KENNY: Yes.

BOARD MEMBER HUGH FRIEDMAN: Thank you.

CHAIRPERSON LLOYD: Questions of board members on
my left?

I had a question of staff. As I recollect,
you're saying the average life of a bus is expected to be 225,000 miles. The traps are warrantied to 150,000 miles. What happens between the additional 75,000 miles?

ON-ROADS CONTROLS BRANCH CHIEF KITOWSKI: I can speak to that slightly, but we also have several trap manufacturers coming up later that may address it more definitively.

CHAIRPERSON LLOYD: They're going to say that it's going to be better than 150,000 miles.

ON-ROADS CONTROLS BRANCH CHIEF KITOWSKI: I think they'll say it's going to be better than 150,000 miles. And in addition, the traps are made in a rather modular format so that the substrata inside could be removed and replaced if needed and that would minimize any cost.

MOBILE SOURCE CONTROL DIVISION CHIEF CROSS: And they're typically in place in the muffler, which means that they're easy to access and change or do things to and they are cleanable, typically. So if the trap deteriorates due to modest plugging from aging, it's possible in many, many cases to clean it up. So I think that maybe the 150,000 miles is right for the original piece, but then I think there are things you can do to extend the life of the trap.

DEPUTY EXECUTIVE OFFICER CACKETTE: I'd like to add one comment is that the experience in Europe is
there's traps that are already well beyond 150,000 miles
durability. So there's some evidence that they will go a
lot longer than the warranty period.

CHAIRPERSON LLOYD: Thank you very much. We've
got 52 witnesses signed up so far. So we're going to
limit those to three minutes apiece. But a couple of
things before we start. I'd like to say a few words here.
Again, bear in mind, when you come to testify
that the Board is very familiar with the problems of
diesel particulate, obviously having identified as a
diesel toxic air contaminant there. So please, if you
want to use your three minutes telling us about that,
fine, but remember in three minutes you'll be gone.

(Laughter.)

CHAIRPERSON LLOYD: The other part of it, too, I

think that here we're not talking about buying dirty
diesel. I've seen stuff in the press and quite honestly I
get a bit irritated that this is being mischaracterized.
And, in fact, if there's any evidence that the Board is
proposing to buy dirty diesel technology, I'd like to know
and I'm sure my colleagues would too.
I'd like to hear about the match issue from the
schools, clearly, that's a critical one here, and how that
impacts us there. I'd also like to hear if there are any
other manufacturers out there that can, in fact, match the
achishments of international with a Green Diesel
technology, because, again, we've been accused here of
favoring one manufacturer. If anybody else is out there
that's available, please, and let us know if there's any
other manufacturers, I'd like to know. I'm sure the Board
would, too, about the availability and cost of low sulfur
diesel. I'm sure that's going to be in there, it's just a
reminder.

And the other thing, if there's any information
out there that diesel traps do not work, I'd like to have
evidence of that as well.

So I think those things I'm looking for in some
of the testimony here as we proceed in the afternoon. So
with that, I'd like to call up the first three witnesses.
We have Brian White, Todd Campbell and Dr. Chung Lieu.

MR. WHITE: Good afternoon, Chairman Lloyd, Air
Board Members and staff. I'd like to thank the staff for
providing the scheduled time for me. I have a time
constraint. It's kind of hard to be in San Francisco and
Sacramento at the same time, so I thank you for that.

CHAIRPERSON LLOYD: Thank you for your testimony.

(Laughter.)

MR. WHITE: That was my three minutes, right?

(Laughter.)

BOARD MEMBER DeSAULNIER: We'll help you to get
to San Francisco.

(Laughter.)

MR. WHITE: My name is Brian White. I'm the Director of Education and Environmental issues for the California Chamber of Commerce. On behalf of Californians For a Sound Fuel Strategy, which is a California Chamber led coalition of labor groups, of trade associations, business groups and agricultural groups et cetera, we are here to provide some brief comments on the Air Board's low emission school bus program guidelines.

Over the last two years, Californians For a Sound Fuel Strategy and its member companies have worked with several state and local agencies to develop reasonable and cost-effective approaches to regulating emissions from stationary, portable, and mobile source diesel fuel engines.

All along our message has been simple. We support federal, State and local efforts to reduce exposure to diesel exhaust. However, these efforts must be fuel neutral while providing flexibility and choices that enable all technologies to compete in the quest to reduce both particulate matter and NOx emissions.

Earlier in the year, the Board recognized the importance of adopting a fuel neutral policy when it adopted a plan allowing transit operators to choose either
a clean diesel path or a natural gas path to reduce emissions from urban transit buses.

The coalition appreciates the Board's action on the effort and hopes that the Board will continue to adopt policies in the future that are consistent with the approach. It will allow operators to choose the fuel path as most cost effective to meet their local needs.

With that in mind, we respectfully urge the Board to approve the staff proposal for lowering school bus emissions which allocates half of the available 50 million for the purchase of clean diesel or alternative fuels. While some have argued about which technology is cleaner, we do not plan to get into that debate.

However, the fact of the matter is that both natural gas and clean diesel should have a stake in reducing exposure to diesel exhaust. Each technology has its benefits, and the decision to choose those technologies should be left to local school districts to prevent, in particular, the school districts that have budget constraints or are cash strapped, and they should not have to choose between books or buses.

No one disputes that clean diesel technology with the use of particulate traps and cleaner engines costs far less to purchase than alternative fuels. Additionally, as you know, diesel fueling and repair infrastructure is
already widely in use, but the natural gas is also a viable technology.

This is important because the goal of the program should be to reduce exposure to diesel exhaust while using the limited resources available in the most cost-effective manner. During the year's budget hearing, there was a big debate about which technology was going to get the funds. Due to the politics of the situation, the Legislature punted the issue to the Air Board and here we are.

But it was believed, at that time, that both clean diesel and natural gas would have a role to play. Our coalition strongly proposed in the budget negotiations that fuel neutrality be an important issue and outcome of whatever the Board decides. And we appreciate that the Air Board staff has followed through given the dynamics of the situation. The concept is simple, encourage all engine and fuel technologies to become cleaner.

The state of California has wisely chosen to focus its efforts on both fronts, encouraging greater use of natural gas, where feasible, and encouraging continued improvements to diesel technology. Again, we urge you to continue down the path and thank you for allowing us to express our views.

CHAIRPERSON LLOYD: Thank you very much, Brian. Question, Mr. McKinnon.
ボードメンバーマッキンノン: はい。大きな違いはありません。ただし、なぜ労働団体があなたのコ�ロエーションに含まれているのか、それが何なのかわかりますか？

モーリス・ホワイト: 労働協議会、労働者協会。

ボードメンバーマッキンノン: それは二つの異なること。州労働者協会? \n
モーリス・ホワイト: はい。

ボードメンバーマッキンノン: ありがとうございます。

チャールズ・ロイド: ご多忙の上に、どうもありがとうございます、ブライアン。

モーリス・ホワイト: ありがとう。

トッド・キャップル: こんにちは、チャールズ・ロイド議長、理事団のメンバー。私の名前はトッド・キャップルで、クリーンエアのための共同体の政策ディレクターです。このプログラムは、カリフォルニア州全体と学校バスに搭乗する子供たちを含むために勝者であると考えています。しかし、その中には提案を含むように提案する可能性があると考えています。環境保護者の一人がここに来るのは初めてであり、次のスライドをいただけませんか？
and can I have the lights dimmed down a little bit so
everybody can see the Board.

MR. CAMPBELL: We have a wide coalition
supporting using the cleanest buses available, under this
program.

Next slide, please.

MR. CAMPBELL: I'd like to remind you that
under -- the ARB has a historical pattern of rewarding or
trying to encourage the cleanest options available. ARB
adopted a resolution, 9849, that stated that they would
replace diesel fuel school buses and public transit buses
with cleaner alternative fuels. You also have put in
place an optional low NOx standard that has been set in

1995. It has been used in the Moyer Program. It has also
been used for mobile source reduction credits, as well as
the mobile source air pollution reduction review
committee.

In fact, I have a letter here today from the
Speaker Emeritus of the Assembly, Antonio Villaraigosa who
also urges Chairman Lloyd and the Board to consider or to
uphold the optional low NOx standard as it has advanced
technology throughout the years. And I will make it
available to you if you do not have a copy of that.
But also the Board and the agency has a goal of zero and near zero emissions. And we believe that alternative fuels are pushing towards that goal. It is a lighter than air gas and it has a proven track record on the record for not only reducing emissions but also being a bridge to fuel cell technology, which will ultimately make zero emission vehicles for kids available.

Next slide, please.

MR. CAMPBELL: This is the problem of in-use emissions. As you can see, the bus clearly didn't come out of the laboratory like that. There was no way that we could allow the bus to come out this way. Our concern is that the Green Diesel technology has not been fully tested, that it has not gone through the riggers that it should go through. And looking at historical emission levels, in our experience with in-use emissions, we have projected that the actual NOx emissions in the useful life will range about somewhere around, as you can see the diesel engine -- or the Green Diesel is the red, but there's about 8.5 grams NOx and the natural gas at 6.3 grams NOx.

That is the importance of starting at a low base from the outcome, you want to certify engines or reward engines that are starting from a lower base, because over
their lifetime they may actually -- they will deteriorate, that's the combustion engine.

Next slide, please.

--o0o--

MR. CAMPBELL: Oh, step back. Also, ARB should advance these, not allow it to backslide. We believe that the US Environmental Protection Agency rule will advance diesel. We do not believe that the school bus rule should do that or could do that. In fact, we believe accepting a 3.0 NOx standard doesn't advance diesel, that International is not required to advance their products to 2.5 grams or meet the optional low NOx standard by October 2002, even though they are under the commitment or under the lawsuit about defeat devices under United States versus Navistar International.

And we also believe that they are a significant portion of the market share, representing 60 percent of school bus sales. And it's incredibly important to encourage them and not reward them at the outset, but encourage them to get to 2.5 grams. We think this is showing the environment by allowing an engine manufacturer, one engine manufacturer, to receive funds without meeting the optional low NOx standard.

Next slide, please.

--o0o--
MR. CAMPBELL: This is also to show you why we think the optional low NOx standards is important because it does advance the technology. As you can see in the out years in October 2002, the optional low NOx standard does move down to 1.8 grams. And we feel that if we follow the path, like we have in the last five years, we'll not only advance diesel, but also natural gas and other alternative fuels will continue to reduce their emissions.

Next slide, please.

CHAIRPERSON LLOYD: Todd, what's the color on the lights there, on your timer?

MR. CAMPBELL: I've got no lights.

CHAIRPERSON LLOYD: Why is it not working?

I think you've had three minutes, so if you've --

MR. CAMPBELL: Sure. I'll just go quickly. I just wanted to touch on toxics. I don't believe that staff can come to you with a credible case today considering in-use emissions and say with any certainty that PM is less on the diesel path versus the alternative fuel path. And if they were equivalent, the diesel particulate is a toxic air contaminant. It has been listed with 30 human epidemiology studies, and there are no studies linking CNG particulate to lung cancer.
And then the final point I have in the next slide please --

MR. CAMPBELL: -- is that there are so many other buses that we need to address. We're requesting that the Air Resources Board put in their BCP, the continuation of this program for next year of $50 million. According to a couple Board members, it's still a possibility to get that money in. And I have letters that actually Dr. Burke will receive when he considers school buses next year from children.

Children want clean buses and this is a very important step. We want to make sure that public funds go to the cleanest buses.

Thank you.

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CHAIRPERSON LLOYD: Thank you, Todd.

Any questions from the Board?

Mr. McKinnon.

BOARD MEMBER McKINNON: Mr. Campbell, you had the smoking bus in your visual there. You're not suggesting that the new Green Diesel bus is the bus that was in that picture?

MR. CAMPBELL: Absolutely not. I think that's -- the smoking buses are addressing the issue of part 2 of the rule, which is the after-treatment. And we actually
are not. We are in favor of the after-treatment. We believe that existing buses do need to be addressed. And the after treatment can play a role. We're hoping -- I mean the problem is that there's so much money being spent on untested and, you know, noncertified equipment. And we want to make sure that we're really going to be protecting children's health by spending it in the -- you know, in the areas that we know we'll succeed on the road.

BOARD MEMBER McKINNON: Well, I know that we all have the same objective. We may end up with slightly different solutions, but I want to kind of bring down the level of, kind of, a promotion like a bus that's spewing when, you know -- let's have a conversation about what we're really talking about. And I don't think any of the buses we're talking about are going to look like that.

MR. CAMPBELL: I also think that waving a white handkerchief in front of a tailpipe really doesn't tell you anything either.

BOARD MEMBER McKINNON: Well, I'll make the same comment if that happens, too.

Thanks.

CHAIRPERSON LLOYD: Mr. Calhoun.

BOARD MEMBER CALHOUN: Yeah. Would your testimony be different if the green diesel had been
certified to the two and a half NOx.

MR. CAMPBELL: I believe that that would be the case, yes. I believe you should reward engines that meet the standards that the Air Resources Board put forward. And by backsliding and stepping back in our standards, then we have a sincere problem, because now do we really mean what we say when we set a standard?

I mean, if this was a standard adopted last year, there may be some flexibility. But this is a standard adopted in 1995. We're almost to the next low optional NOx standard. We should be going, you know, to zero, not the other way around.

CHAIRPERSON LLOYD: Thanks.

Dr. Chung Liu.

DR. CHUNG LIU: Chairman Lloyd, Members of the

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Board, the South Coast AQMD has long recognized the adverse air quality and health impacts of diesel exhaust on children. In January 1999, under the initiative of our government Board Chairman Burke, the South Coast District adopted the Children's Air Quality Agenda to pursue additional measures to protect children from the disapportionment impacts from diesel exhaust.

More recently our board started to adopt a school bus program. The foundation is to provide funding assistance for purchasing cleaner school buses and
retrofitting the existing fleet with the emission
controls.
The South Coast District considers a proposed
lower emission school bus program guidelines for
replacement and retrofit of older diesel buses to be of
the utmost importance, since there isn't enough funding
available from local and State sources at this time, but
we do have a few comments here to make about both the
retrofit program and also the bus replacement program.
On the retrofit part, the South Coast district
strongly supported a funding level of $20 million as
originally proposed by your staff, rather than the last
minute change to $10 million for existing school bus
retrofits. We believe that $20 million allocation in
funds for installation of a particular trap will yield
immediate and much, much bigger benefits. And so for that
matter, we really don't see the rationale of reducing from
our original proposal.

About the replacement program, the South Coast
District strongly opposes the NOx emission of three grams
per brake horsepower hour for new replacement buses. I
have to point out, the standard site for CNG buses in the
staff guidelines, 2.5 grams and .03 gram for PM, is not
the CNG performance at this time at all. And this is by
far better than that.
And the ARB continues using the optional standard of 2.5 grams for all other heavy-duty vehicles. And that's combined for PM and NOx -- I'm sorry for PM and hydrocarbons. And actually the option standard is expected to achieve 1.8 grams of NOx. And the three grams really is lax, particularly considering that now the ARB is going to certify themselves and rely on EPA FEL's certification process. We just don't know the rationale for doing that. And so we propose that we should stick to a higher standard on the one.

Secondly, we propose the guideline of the school bus replacement program to include the replacement of diesel school buses with large size pool when powered by gasoline, which mean much lower amount of NOx, particulate matter and air toxics.

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The special education problem calls for greater demand on mid-sized vehicles than full-sized buses in a large number of school districts. We propose the type of vehicle be allocated in the petroleum-based new vehicle portion of the program.

Lastly, the South Coast AQMD supports allocation by population, but we also believe that each air district should retain needed flexibility which will enable them to very effectively distribute funds for the new bus replacement program to achieve the clean air goals. South
Coast proposed that the special types of replacement buses be determined locally. In case of eligibility of new Diesel replacement buses, the maximum amount of a local match should not exceed the cost of a particulate trap, because that's what it's mainly about.

That concludes my comments.

CHAIRPERSON LLOYD: Thank you, Doctor. I'd like to ask staff to respond to the question of certification of the three gram.

EXECUTIVE DIRECTOR KENNY: With regard to certifications, what we were doing is essentially recognizing that the three gram engine is cleaner than the current four gram certification standard that actually does exist. There are optional standards, and 2.5 is where the current optional standards are.

However, we were trying to also reflect -- what we were trying to also reflect in the proposal that we were making to the Board is that there is a differential in the cost of the buses, whether it's a diesel or a CNG bus.

And take into account that the cost of the CNG bus is roughly 30 percent higher than the cost of a diesel bus, and then you take into account the fact that you have a two and a half gram standard and you have the three gram standard. In effect, what you can do is you can buy three
cleaner diesels for the price of two cleaner CNGs. And we thought there was, therefore, a value from a health standpoint to bring the cleaner diesels into the marketplace. The other thing I would mention, also, is that the current standard is four grams. And so they are essentially certifying to a lower standard than the current standard. And then the other thing that we talked about was the fact that on the PM side, the PM levels that we were talking about for the diesel are lower than the PM levels we were talking about for the CNG. And so when we balanced all of those things together, the certification numbers, it seemed to be reasonable to essentially allow the clean diesel into the marketplace because we got lower PM and then in aggregate we got lower NOx.

CHAIRPERSON LLOYD: What about the issue with certification by us vis-a-vis EPA, the difference there.

EXECUTIVE DIRECTOR KENNY: Well, these are FEL and those are EPA certification standards.

CHAIRPERSON LLOYD: Any questions from the Board?

Thank you, Dr. Lieu.

We have Robina Suwol, Sandy Silberstein, Bruce Bertelsen, Kevin Hallstrom and Henry Hippert.

MS. SUWOL: Hi. Thank you very much. I want to
take the opportunity to thank the Board for your
consistent and continual efforts to protect the public.
My name is Robina Suwol. I'm a parent of a son, Nicholas,
who's here with me today, who has asthma.
I have no vested interest in the financial
outcome of this hearing today. And I don't know if anyone
present, I certainly hope not, has ever had to witness a
child gasping for air from an asthma attack. It's
particularly horrifying, particularly when the cause is
oftentimes trapped behind a school bus that's spewing
toxic diesel.
Asthma, as we all know, is the number one
childhood illness in the United States right now. And
we're all familiar with the studies that link cancer and
asthma to diesel. I'm here today and I've come up at my
own expense with my son to request that this Board please
not weaken the standards of public health. The Green
Diesel proposal for which you are all being heavily
lobbied proposes that $15 million of taxpayer's money be
used to, hopefully, repair, and I say hopefully, because
there's no guarantee that these buses will run any
cleaner.
In fact, past tests have proved that companies
sold engines that, yes, they could pass laboratory smog
tests, but in reality they spewed pollution equivalent to
65 million additional cars.

Therefore, I do not believe that the public supports a $15 million payment to International Truck with the condition that they're going to try to poison children and community members just a little bit less.

I request that the use of the $15 million of taxpayer money please be used to purchase proven cleaner alternatives. And I'll end by saying that I thank you for the time.

My son asked how government worked. And I explained to him that everyone is given the opportunity to speak. And he said even a nine-year old. And I said yes, and so if he can just take one moment.

CHAIRPERSON LLOYD: Certainly.

MR. BUBER: Hi. My name is Nicholas and I have

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asthma. Kids are getting sick and dying from diesel.

Please help us.

CHAIRPERSON LLOYD: Thank you.

MS. SUWOL: Thank you very much.

CHAIRPERSON LLOYD: I just want to reiterate that this Board has no intention of -- we intend to clean up the air and not make it worse.

MS. SUWOL: Thank you very much.

CHAIRPERSON LLOYD: Thank you. Sandy Silberstein, Bruce Bertelsen, Kevin Hallstrom.
MS. SILBERSTEIN: I'm Sandy Silberstein and I'm representing the Riverside County Schools Advocacy Association, which is comprised of all school districts of Riverside County. And we are in support of the staff recommendation. We are especially pleased that -- first of all, we're very pleased to have $50 million for school buses. We are especially pleased with the fuel neutral policy and having the choice of fuels. We're pleased with no match on the retrofit program. And we are pleased that you are proposing to allocate the money on a population basis.

However, we do ask for one amendment and it speaks to Chairman's Lloyd request that we speak to the match issue. We would request that the Board consider amending the proposal to either reduce or eliminate the match or to, at least, maybe tie it to a district's ability -- a school district's ability to pay tied to their -- and, excuse me, and their transportation costs. I think you're all probably aware that we are -- the public schools are the largest suppliers of public transportation in the State of California. And I would argue that that system is in crisis and is at risk. And the Air Resources Board has an opportunity here, and I would say even more so in the future to somehow save that system.
We're asking for a reduction in the match for purely economic reasons, obviously. We have in Riverside county 23 school districts. One of them has already totally eliminated home-to-school transportation for its students. Another has severely reduced home-to-school transportation, providing it only to special education students and those that live very, very far away in rural areas. A third district is considering eliminating home-to-school transportation altogether.

That is a crisis for clean air in the State if it continues. It's my understanding we have somewhere upward of 60 school districts in the state now that have already eliminated home-to-school transportation because of the costs of the program. We have, as an example, the Murieta Valley School District in Riverside county that, since 1983, has grown 4,000 percent in population.

Their funding for home-to-school transportation has grown only marginally and now they -- back in 1983 they received roughly $70,000 a year for home-to-school transportation. Now, with 4,000 percent more students, they receive $78,000 a year. That's a $1.2 million encroachment on their budget. They will have to make the hard economic decision very soon whether to continue to bus their students at all.

The 50 million is a wonderful start. We're
asking you to consider reducing the match so more of us
can play and to consider our ability to pay when you do
allocate, if you do impose a match.
And finally, we would ask that the Air Resources
Board step forward and assist us in getting more State
funding in the future for home-to-school transportation.
We believe the system is worth saving.
Thank you.
CHAIRPERSON LLOYD: Thank you very much.
Dr. Burke.
BOARD MEMBER BURKE: Before you go.
CHAIRPERSON LLOYD: One question.
BOARD MEMBER BURKE: Some school districts have
voiced an opposition to retrofit. Is your school district
one of those?
MS. SILBERSTEIN: No, we're not. None of the 23
are.
BOARD MEMBER BURKE: So you have no problem with
retrofit?
MS. SILBERSTEIN: We think retrofitting is a
great idea.
BOARD MEMBER BURKE: What if all the money was
retrofit?
MS. SILBERSTEIN: I guess that sort of gets into
the issue of, and that's not my area of expertise, of how
much clean air we get out of this, okay.

BOARD MEMBER BURKE: Well, we get more clean air out of retrofit immediately than we get out of all the other, but we don't advance technology, so it's a trade off.

MS. SILBERSTEIN: Okay.

BOARD MEMBER BURKE: I just was trying to get to the bottom of why some school districts are opposed to retrofit. I thought maybe you could --

MS. SILBERSTEIN: They aren't ours and I don't know the answer.

BOARD MEMBER BURKE: Thank you very much.

CHAIRPERSON LLOYD: Thank you.

Bruce Bertelsen, Kevin Hallstrom and Henry Hippert.

MR. BERTELESEN: Good afternoon. My name is Bruce Bertelsen, the Executive Director of Manufacturers of Emission Controls Association. And following me will be individuals from Englehard, Johnson-Matthey and Ceryx, three of our member companies who are manufacturing diesel particulate filter control technology.

We're here today to express our strong support for the proposed guidelines. We recognize that the Board and the staff faces very difficult choices in trying to design and establish the funding allocations, but we think
that the program, as outlined, fairly balances a lot of competing and important considerations and it will achieve important objectives.

First, it will significantly reduce the exposure of school children and others to diesel PM exhaust.

Second, it will achieve NOx reductions. And third, it provides critical support for three important strategies that, I think, in the long range are going to play an incredibly important role in reducing overall diesel PM emissions, alternative fuel technology, lower diesel engine technology -- excuse me, lower diesel PM engine technology and retrofit strategies.

Because there were some questions asked, I want to use the rest of my time to touch on some things that were mentioned previously. First of all, with regard to diesel particulate filters, that's a technology that is available today. It's been demonstrated. Actually, worldwide there are about 40,000 engines that have been equipped with filter technology.

I had an opportunity at the advisory committee meeting earlier this year where experts from Switzerland, Sweden, and Germany came and shared with members of the advisory committee, the retrofit advisory committee, experience with filter technology in Europe. And all I can say is it was an extremely strong endorsement of the
The durability has been well established, as was mentioned previously. There are filters that have been on vehicles for literally hundreds of thousands of miles and are performing effectively. A question was raised about toxic emissions. We did a study about a year and a half ago where we demonstrated about an 80 percent reduction in PAH emissions, total PAH emissions. There have been a number of other studies that have shown similar results.

Another factor which hasn't really been touched on here is that in addition to achieving PM mass emission reductions of 90 percent or more, filter technology is extremely effective in controlling the ultra-fine particles, the carbon based ultra-fine particles. A number of test programs around the world have demonstrated that filter technology can control up to 99 plus percent of these ultra-fine particulates.

So I think it's a technology that will serve the citizens and the school children of California well.

Thank you very much.

CHAIRPERSON LLOYD: Thank you, Bruce.

BOARD MEMBER BURKE: One question. Forty thousand units are currently being used in various products for traps. Can you tell me where they are?

MR. BERTELESEN: Where they are?
BOARD MEMBER BURKE: Yeah.

MR. BERTELSEN: They're in Europe. They're in the United States. They're in Asia. There are some in Latin America.

BOARD MEMBER BURKE: So you feel most of them are in Europe?

MR. BERTELSEN: I'll defer to the members, but I would believe that the majority of them are in Europe.

BOARD MEMBER BURKE: What has me, you know -- and I'm a trap advocate, you know, so I don't want you to misunderstand me, but what I don't understand is how Europe got so far ahead of California. I don't understand that. And I don't understand how all these traps, forty thousand is a lot of traps when you start to think about it, how they got -- what's the certification process used for wherever these 40,000 traps are? And how come if they were certified in those countries, why weren't they certified in California?

MR. BERTELSEN: I guess I'd make two comments. First of all, one of the reasons that filter technology got the jump in Europe was because there was availability of low sulfur fuel. And what we've seen is where low sulfur fuel is available, is technologies perform extraordinarily well. And California has taken a big step in that direction. And you're absolutely right, Europe
may be -- this may be the one instance where Europe got ahead of us, but I think with the California program they're going to be a distant second in a couple of years. But that was one of the major reasons in terms of the on-road experience. But there also have been filters put on off-road equipment all over the world as well. So it's not like -- I don't know, maybe one of our members can give us --

BOARD MEMBER BURKE: You know, they don't have Green Diesel fuel in Japan and in Asia and a lot of these other countries you're talking about where these traps are operating. I don't want to prolong this. We're going to be here all day anyway. But these are questions that I'm sure are ruminating through the minds of all my colleagues, so I just wanted to --

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CHAIRPERSON LLOYD: Well, I know from attending the meeting down in LA on the retrofit, I can speak from talking to people in Europe. I think what Bruce reflects there is definitely correct. Again, I don't know about that, there may be spot markets in Asia and things. But, again, I think we look to Englehard and Johnson-Matthey to maybe address those.

Yes, Mr. McKinnon.

BOARD MEMBER MCKINNON: Yeah, two things. I think one of the questions earlier talked about the
150,000 miles versus a 225,000-mile life of the bus.

Don't diesel engines run cooler and isn't there kind of evidence that given low sulfur diesel that's consistent, the traps should last longer than say a gasoline vehicle because of heat?

MR. BERTELSEN: Well, what will happen -- if you have low sulfur fuel, if you have an engine that operates with a relatively lower temperature or an engine that operates in an area with a cold ambient temperature, the availability of low sulfur fuel facilitates the regeneration or cleaning of the filter. And you're absolutely right, as long as that continues to occur, which it will occur with low sulfur fuel, these filters will last for an incredibly long time.

I mean, there have been engines that have run 600,000 kilometers or more with filters and low sulfur fuel. The reason that you have filter technology in other parts of the world is that if the engine in its particular application runs very, very hot, for example, mining equipment, which is full load operational all the time, the fact that you're using slightly higher sulfur is not going to be a factor, because you're reaching such high temperatures that that filter is going to regenerate anyway.

When you're looking at the on-road experience
where the temperatures may be lower due to the design of
the engine or the operating condition, then it's far more
important, in fact it's critical, to have low sulfur fuel
to ensure that regeneration, that cleaning of the filter.

BOARD MEMBER McKINNON: How many years would you
guess or estimate have particulate traps been protecting
miners and firemen in fire houses?

MR. BERTELSEN: I believe filter technology was
introduced in mine applications in the early eighties.

BOARD MEMBER McKINNON: I guess my last question
you were talking about Europe, and it kind of reminds me
of where we really want to go. I mean buses are a small
percentage of the diesel emissions that we experience in
the state. A lot of it is trucking.

And you talked about Europe. What's happening

with trucking and diesel and particulate traps in Europe?

MR. BERTELSEN: I'm going to let some of our
individual members give you some information on that, but
obviously the first target for filter technology in Europe
were buses because they operated almost exclusively in
high population zones, but there has been some work done
with trucks as well.

And there is absolutely no reason why the
technology can't be applied as effectively to trucks as it
has been to buses.
MR. HALLSTROM: Good afternoon. My name is Kevin Hallstrom and I'm the technical manager for the Environmental Technologies Group at Englehard Corporation. Englehard is pleased to testify in support of the proposed school bus guidelines.

The proposal would provide significant emission reductions on vehicles that carry our most precious resource, our children. Englehard is a Fortune 500 Corporation that is a leader in the development of emission control catalyst technologies. Englehard commends the Air Resources Board for focusing the program on the emission that is deemed most harmful, that is the particulates.

The program will significantly reduce the particulate emissions of the California school bus fleet. Englehard supports the effort to utilize the best available technology to obtain the maximum emission reductions cost effectively. By utilizing vehicle replacements with both alternative fuels and clean diesel and along with retrofits, the program is designed to offer
the school districts the options they need to make the
program a success.

Englehard supports the fuel neutrality of this
program and the precedent it sets by utilizing the best
technology currently available, new clean diesel buses,
new clean alternative fuel buses with catalysts that
address formaldehyde and carbon monoxide and buses
retrofitted with particulate traps using ultra low sulfur
diesel fuel.

At this time, Englehard has already designed
muffler replacement kits for ten different vehicles using
seven different types of engines of various ages. And we
are continuing to develop new designs in conjunction with
the original equipment muffler manufacturers.

Upon ARB certification, the current designs will
be available for large-scale production in the first
quarter of 2001 and include designs for pre-1994 and
post-1994 buses. The retrofit kits using Englehard's
proven DPF technology will provide over 95 percent
particulate reductions and over 80 percent reduction of
carbon monoxide and hydrocarbons.

The retrofit kits will allow the school bus
districts to continue to utilize their existing bus fleets
but meet the emission requirements set forth in the
proposal, for a minimal cost while maximizing the emission
reductions per benefit per dollar.

Again, Englehard supports the school bus proposal and commends the ARB for its continued pollution control leadership.

Thank you.

CHAIRPERSON LLOYD: Thank you very much.

Questions?

Yes.

BOARD MEMBER RIORDAN: A question. Going back to some of the prior conversation, do you have any existing work that you've been party to in Europe, for instance, now on a bus or a truck there, with your --

MR. HALLSTROM: Yes.

BOARD MEMBER RIORDAN: And the experience is good?

MR. HALLSTROM: Mostly good, yes.

BOARD MEMBER RIORDAN: And duration is, what, in terms of the --

MR. HALLSTROM: Three years up to about 200,000 miles. We've also had a fleet demonstration in New Jersey on their transit vehicles for the last five years. We've been doing the ARCO program. And I believe the initial vehicles that were installed there were school buses from San Diego that were installed about 16 months ago and already have 30,000 miles.
Some of the tanker trucks for ARCO and Ralph's are now a hundred, a hundred twenty thousand miles and still operating.

BOARD MEMBER RIORDAN: Thank you.

CHAIRPERSON LLOYD: Yes. Dr. Friedman.

BOARD MEMBER WILLIAM FRIEDMAN: Tell me, what does it actually cost in real dollars to do one bus?

MR. HALLSTROM: The estimated cost is between four and six thousand dollars per bus. It depends a little bit on the size of the engine that's used in the vehicle and the packaging that's necessary to install it.

BOARD MEMBER WILLIAM FRIEDMAN: That's with installation?

MR. HALLSTROM: It's with installation.

CHAIRPERSON LLOYD: Thank you very much.

BOARD MEMBER CALHOUN: What about the longevity, I'm talking about the mileage? What do you estimate is the life of the catalyst in terms of miles?

MR. HALLSTROM: I mean if you look at the questions that have come before, you talk 150,000 miles, that's the warranty. That is an emission warranty. It's just like your car. You don't expect the catalytic converter to stop working after 100,000 miles. That's just when the warranty expires.

I would expect these to last well in excess of
150,000 miles. On a school bus it's a little difficult, because they do not operate that many miles, 225,000 miles is probably 15 years. So on a school bus, we probably expect it to last the life of the vehicle where on a transit vehicle, like on a transportation truck, 300,000, 400,000 miles would not be unexpected.

BOARD MEMBER CALHOUN: What about the efficiency at this extended mileage?

MR. HALLSTROM: Okay. Well, you have to look at the filter. There's a physical mechanism of the filter. And that physical mechanism reduces 99 percent of the carbon particles, which is 80 plus percent of the diesel particulate that is coming out of the vehicle. And in addition to that, you have a catalyst on there that will reduce the remaining portion and is used for both reducing

the soluble organic fraction and for providing the method of regeneration.

So that catalyst is the same type of technology that's used currently on urban bus catalysts. And life on those type of catalysts is improved in excess of 500,000 miles. So the catalyst technology is very much expected to be very similar reductions, 90 to 100 percent. And there's been some SAE papers that have shown that even after 300,000 miles of operation.

CHAIRPERSON LLOYD: Thank you.
MR. HIPPERT: Good afternoon, Chairman Lloyd, Board Members and staff. My name is Henry Hippert. I'm From Johnson-Matthey. I appreciate the chance to address the Board regarding the proposal for retrofitting of school buses.

The technology that Johnson-Matthey is proposing to use for the program is a ThatRT patented PM emission control device. This technology is in use worldwide and is available for a wide range of applications. The product is currently being manufactured in California. It is available today for production quantities.

And just on behalf of Johnson-Matthey I want to express our support for the program. I'm sorry to say our diesel expert was unavailable to be here today, so I will bring back any questions you have, but don't think I will be able to answer them as best as we could.

CHAIRPERSON LLOYD: Where are they manufactured you say?

The completed manufacturing is done in California.

CHAIRPERSON LLOYD: But where?

MR. HIPPERT: In Southern California, Rancho Santa Margarita.
CHAIRPERSON LLOYD: Okay. Any questions?

Thank you.

MR. HIPPERT: Thanks.

CHAIRPERSON LLOYD: Jeff Redoutey. I don't think Gerald Smith is here. He's not here.

MR. REDOUTEY: Gerald had to catch a plane.

Good afternoon. I am Jeff Redoutey. I'm the vice president of sales and marketing for Ceryx. Ceryx is a Ventura County, California based company that develops, manufactures and markets division emission control -- excuse me, diesel emission control devices. These devices control particulate matter, carbon monoxide, hydrocarbons, and oxides of nitrogen.

I wanted to spend a few moments today lending Ceryx's support to this program. We are very excited with the opportunity to participate in cleaning school bus emission in the State of California. I think this is a great example of California's leadership throughout the nation. I would expect other states to follow suit when they realize the success of this program. We believe that retrofits are very cost effective methods to reduce diesel emissions very quickly in a wide variety of school buses. We applaud the Board for including significant dollars for retrofits and we feel that it is money exceptionally well used.
I would like to inform the Board of some of the activities the Ceryx is undergoing at this point in time to prepare for the effort. Specifically, a significant number of our resources at Ceryx are devoted towards participation in the program. We look at it as three particular things that we need to accomplish. The first is to demonstrate the technology.

And we are doing that currently in the South Coast demonstration program. And we feel that we will be demonstrating very quickly, as the bus gets tested, that we will see simultaneous reduction of particulate matter and NOx on those vehicles.

The second thing that we are spending a great deal of resources on is verification here in California under -- working very closely with Scott Roland and his staff in order to become a verified technology here in the State of California.

The third thing that is consuming a significant number of resources is preparation for manufacturing here in the State of California. Given the program, we have found that there are a great deal of manufacturers here in the State of California that are very interested in working with Ceryx to accelerate manufacturing. They do not feel it is going to be a problem to deliver the quantities the program calls for.
We look forward to contributing, in any way that we can, towards making the area that these children breathe that much cleaner and being able to tackle some of these difficult applications.

Any questions?

BOARD MEMBER RIORDAN: Mr. Chairman, if I might?

CHAIRPERSON LLOYD: Yes, Mrs. Riordan.

BOARD MEMBER RIORDAN: You testified that you’re currently a part of the program of testing with the South Coast and the ARB.

MR. REDOUTEY: Yes, we are.

BOARD MEMBER RIORDAN: And so you’ve actually got some of your equipment on a particular bus or engine, I don’t know how they do that?

MR. REDOUTEY: Yes, we do. We participated with three vehicles at the point in time, a 1978 vehicle, I believe a 1987 vehicle and a 1999 vehicle.

BOARD MEMBER RIORDAN: And when will the testing be completed?

MR. REDOUTEY: The first vehicle is scheduled to be tested the latter part of next week and it will probably go into the following week. And that will be the 1978 vehicle. We have monitored that vehicle very closely since we installed the device. And we feel very comfortable that the device is doing exactly what it's
BOARD MEMBER BURKE: I think Mrs. Riordan also wanted to know about the durability testing.

MR. REDOUTEY: Yeah. The durability testing right now is ongoing literally 24 hour days, seven days a week at the Ceryx facility. What we are doing is we are testing the longevity of the catalysts involved by putting in an awful lot of hours on the devices. We feel that is the most cost effective and efficient way to demonstrate the longevity of the catalysts that are involved in our system.

BOARD MEMBER BURKE: But is that being done on a vehicle?

MR. REDOUTEY: There are vehicles currently --

BOARD MEMBER BURKE: Is that being done on a vehicle?

MR. REDOUTEY: That particular -- Dr. Burke, that particular demonstration is not done on a vehicle. It is done on a generator set. We have vehicles here in Sacramento on school -- we have devices on school buses that are in use, as well as approximately 20 other vehicles throughout the world that are in use every day.

CHAIRPERSON LLOYD: Thank you.

Tom Trueblood, Lelon Forlines, then we've got Greg Vlasek and Chris Brown.
MR. TRUEBLOOD: Good afternoon, Dr. Lloyd, members of the Board and members of the staff. My name is Tom Trueblood. I am manager of Public Affairs International at International Truck and Engine Corporation in Chicago.

I'm not going to read the written statements that we passed out, because I know Dr. Lloyd would give me the hook after about the third paragraph. But I do want to summarize the main points of the testimony. And that is, first of all, we support the staff's proposal. We think it's a fair compromise. We realize they're trying to balance a lot of pressures and a lot of different interests coming from different directions. And, frankly, we would have preferred that all the money went to Green Diesel technology, but we know that, you know, the world isn't perfect.

(Laughter.)

CHAIRPERSON LLOYD: Don't be greedy.

(Laughter.)

MR. TRUEBLOOD: We believe that the staff's proposal really tries to provide the most environmental cleanup for the money that's being spent. And I wanted, in case you haven't seen it, I want to direct your attention to page 35 of the staff report, because I think that's really the heart of the matter.
Basically, what that shows is that what the staff did basically is to say if you spent $30 million on Green Diesel technology, what International calls Green Diesel technology, what the staff calls intermediate diesel technology, I realize I don't want to go with the brand name, you actually get emissions benefit and you get more old buses off the road than if you spend the same $30 million on natural gas buses.

I won't actually go through the numbers, but they're there in the report and it's quite dramatic. And that's also reflected in the body of the report. Now, there is criticism of these figures. And the criticism is that these are based on certification emission levels rather than in-use emission levels. And I'd like to put that one to rest.

First of all, the advocates of natural gas have cited in-use emissions data comparisons between natural gas and old diesel, but they haven't compared in-use data of what we call clean diesel or Green Diesel with natural gas engines. The latest information that we have comes from the BP/ARCO EThat Diesel program, in which in-use buses were tested on an in-use gram per mile chassis dynamometer test in the San Diego Unified School District.

And they actually found that the in-use emissions were better than we would have expected from the
certification numbers. They actually came up, in the case
of the buses, with no detectable hydrocarbon or
particulate emissions. So we think that that pretty much
lays to rest the in-use emissions problem or issue. And I
think the staff has also addressed that in their answer to
the earlier question about that.

The bottom line is that --

CHAIRPERSON LLOYD: Roughly three minutes.

You've taken roughly three minutes, can you wrap up?

MR. TRUEBLOOD: Yes. Children are going to be
better served by Green Diesel technology, because they're
going to be exposed to less NOx overall and less
particulates. And they're going to be riding in more
cleaner new buses.

So I'd like just to address Nicholas. I don't

know whether he's still here or not, but I'd like to tell
him and all of you, Nicholas, we're on your side. I'm a
father too. We're trying to do our part to speed the
cleanup of California's air.

CHAIRPERSON LLOYD: Can he get a ride in your
bus?

MR. TRUEBLOOD: Yes, absolutely.

CHAIRPERSON LLOYD: Professor Friedman.

BOARD MEMBER HUGH FRIEDMAN: A quick question, if
I may, Mr. Trueblood. In your written materials that you
just handed out, you indicate that, "The 2001 Green Diesel
technology bus will emit 3.0 grams of NOx per brake
horsepower hour, but in just three years by 2004," I'm
quoting, "We will have further reduced that NOx emission
to less than 2.5 grams, matching the emissions of the
natural gas powered buses." Can you tell me why that
can't be accomplished any sooner?

MR. TRUEBLOOD: The reason it can't be
accomplished any sooner is that our product plans are
basically on target for 2004, a January 2004 compliance
with the EPA and ARB standard. And unlike many of the
other engine manufacturers, we were not required to pull
forward the compliance technology, and we set our product
plans on that basis. And there simply isn't time now for
us to get there by October 2002, which is their deadline.

BOARD MEMBER HUGH FRIEDMAN: So while you've been
the first to develop a so-called clean or intermediate
diesel engine, you're not able to accomplish that until
2004?

MR. TRUEBLOOD: Right. We're actually bringing
in a whole new line of engines. All of our engines will
be completely new in January 2004. And that's basically
what we're concentrating on. And, you know, we simply
don't have the manpower or the money to try to pull
forward the technology with the old engines.
Chairperson Lloyd: Mr. McKinnon.

Board Member Calhoun: I have one question I forgot to ask.

Chairperson Lloyd: Well, Mr. McKinnon and then Mr. Calhoun.

Board Member McKinnon: So International was able to keep off a Federal Consent Decree pushing them to 2.5, in that you were not under that Consent Decree, you made product plans, your plan to switch over the engines in 2004. I think I get it now. Is that because -- were you able to stay out of the Federal Consent Decree because your company was performing better at cleaning up the emissions to date?

Mr. Trueblood: Yes.

Board Member McKinnon: So, in effect, if we impose the 2.5 on your company, it would be kind of along the lines no good deed goes unrewarded. We would --

(Laughter.)

Mr. Trueblood: You took the words right out of my mouth.

Board Member McKinnon: Okay.

Board Member DeSaulnier: He put them right in.

(Laughter.)

Board Member McKinnon: I also want to --

Chairperson Lloyd: I think on that one after
that we need to go back to King Solomon.

(Laughter.)

EXECUTIVE DIRECTOR KENNY: Actually, if I could just maybe add one thing. International is part of the Federal Consent Decree. It's just the remedy associated with International is different than the remedy that was associated with, for example, some of the other companies in which the other companies had to pull ahead on a tighter timeframe.

BOARD MEMBER McKINNON: I also want to compliment you. I was a brand new Board member when you came to California with the Green Diesel bus. And I'm very clear that you were a lot of the push that we needed to get a discussion going hard and fast about moving the 15 PPM diesel. I mean BP moved and lots of other people, WSPA, a bunch of people moved. But I think when you brought that bus around, that kind of ended up providing a focal point to push that discussion. And I want to thank you for that.

MR. TRUEBLOOD: Well, thank you.

CHAIRPERSON LLOYD: Mr. Calhoun.

BOARD MEMBER CALHOUN: I'll pass.

CHAIRPERSON LLOYD: Given the fact it's going to take you until 2004 to meet the 2.5 standard, do you anticipate any competitors taking advantage of the market
MR. TRUEBLOOD: That's something that has occurred to us might happen. There's no reason that other manufacturers couldn't pull forward, couldn't put a product on the market. The technology, as you just heard from the after-treatment manufacturers is readily available, and you know, any of our competitors can put together the package and compete with us.

BOARD MEMBER CALHOUN: Now, I'll ask my question. What if that happens? Could International pull ahead their --

MR. TRUEBLOOD: Well, we'd have to make that decision of whether it was -- you know, whether it made sense for us to go to the effort and expense. I think with the timeframe we're talking about, it would be awfully difficult for us.

CHAIRPERSON LLOYD: I think given the question, you're saying well, the 2.5 doesn't fit in with your current market plan. The other part of that is that well, should the school children, in fact, also wait around until you can get to 2.5. Now that's the other side of that, so market plans change and whatnot.

MR. TRUEBLOOD: Sure.

CHAIRPERSON LLOYD: Mr. McKinnon.

BOARD MEMBER McKINNON: Is it a market plan or is
it a production of a new engine plan? Those are sort of
different things.

CHAIRPERSON LLOYD: Yeah, I agree.

MR. TRUEBLOOD: Yeah, you're right. And really
we're talking about a whole new product in 2004, not
just --

BOARD MEMBER MCKINNON: If you can bring the
production of those engines through earlier, you ought to,
you know. I just don't think we ought to make you do it
because you stayed out of trouble.

CHAIRPERSON LLOYD: No, you're right, Mr.
McKinnon, that rather we'll say product time.

Dr. Burke.

BOARD MEMBER BURKE: Is it really money or is it
really a marketing plan? Is it a function of money,

because it would seem like we would then consider maybe an
alternative if it's really just a function of money, as
you say, to move the production of these engines forward?

MR. TRUEBLOOD: Well, it isn't just a function of
money. It's resources in the larger sense. We have lead
times.

CHAIRPERSON LLOYD: And one of those is standing
behind you.

MR. TRUEBLOOD: We have lead times that we have
to -- you know, the product development process is a long
one. And, you know, we've set those product development
processes into motion. And, you know, that's basically
where we're going to come out. We don't know how we could
speed them up.

CHAIRPERSON LLOYD: Warren did you want to --
MR. SLIDOLSKY: Yes, I'm from engine engineering, so I'm a little more closely to the issue.
CHAIRPERSON LLOYD: Maybe you could identify
yourself for the court reporter.
MR. SLIDOLSKY: Yes. I'm Warren Slidolsky. I'm from International Truck and Engine Corporation. I'm
Manager of Environmental Staff. And I think Tom has
gotten at a lot of the issues and gotten it quite right.
But the real critical issue of pushing forward to the 2.5
NOx level is associated with the technologies that are
needed. And a critical technology in the reduction of NOx
is EGR.
And for EGR, we need to develop that technology, so we can be assured that it will do all the things that are intended. There will not be customer dissatisfaction issues. And clearly in 2004, we will have the EGR systems. It's just that, in our case, because we didn't have the pull ahead, we haven't started that program, so we're in a position to add EGR next year. So that's the dilemma we find ourselves.
It isn't marketing and money -- well, in a sense it's money. But to drop everything, to ensure for just the school bus to get that EGR in, many of our other programs would suffer dramatically. So I'll stop with that and if you have some additional questions.

BOARD MEMBER RIORDAN: Mr. Chairman?
CHAIRPERSON LLOYD: Yes, Mrs. Riordan.
BOARD MEMBER RIORDAN: Help me with EGR?
MR. SLIDOLSKY: Exhaust Gas Recirculation.

Basically, what that does is cool down the combustion temperature, because the cooler the combustion temperature, the less tendency you have to produce NOx.

BOARD MEMBER RIORDAN: Thank you.
MR. SLIDOLSKY: I'm sorry.
BOARD MEMBER RIORDAN: No, that's all right.

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CHAIRPERSON LLOYD: Thank you. Do you have another person from International testifying?
I've got Lelon Forlines.
MR. FORLINES: I would like to make a comment that -- Tom has already covered one of the issues that I was going to address. Dr. Lloyd and ladies and gentlemen of the Board, I very much appreciate the efforts not only of your input, but that of the staff. I think it was very wise in the decision that you have made.
And I was going to make one comment about San
Diego Unified School District has been one that we have
like 30 units that have been operating there for a year
the past September, without any failure, without any
downtime whatsoever. And if you're looking to have
someone to call to inquire from a source outside of
International, Mr. Roger Hanson, I'm sure as well as
Englehard and Johnson-Matthey would address any questions
you may have with regard to the operational status of
those units.

CHAIRPERSON LLOYD: What's the total accumulated
mileage on those buses?

MR. FORLINES: The mileage right now would have
to be somewhere in the neighborhood of 35,000 to 50,000
miles. And that would vary depending on the bus and the
routing that they had taken. But I stay in touch with

Roger on a pretty regular basis. And yesterday afternoon
he assured me that he -- as a matter of fact, he asked
that I assure you that there is no down time. There has
not been any failure or affiliation to a failure with
these products being installed.

CHAIRPERSON LLOYD: Thank you.

MR. FORLINES: Thanks again for your time.

CHAIRPERSON LLOYD: We have to have Greg Valsek
and Chris Brown, then we're going to take a break. I know
both of these gentlemen have time constraints, so we'll
11 take them out of order.
12                MR. VLASEK: Thank you very much, Chairman Lloyd
13 and members of the Board. I'm Greg Vlasek with the
14 California Natural Gas Vehicle Coalition.
15                There's a lot to like and a lot of hard work
16 that's gone into these proposed guidelines. We have one
17 key issue to bring before you today and urge you to change
18 it, and that is the $15 million carve out for the
19 International diesel engines that don't meet the 2.5 gram
20 NOx standard. And you've heard a lot about that. You're
21 going to hear more about it, so I don't want to belabor
22 too much, but I do have a couple of key points to make.
23                I'm sure the staff has told you that there are
24 currently natural gas engines certified to the .01 PM
25 standard. So this is not a case where necessarily natural
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1 gas engines aren't going to be there. In fact, they're
2 already there. They're just not available for the school
3 bus market. There are four engines certified to .01 PM as
4 well as to the 2.5 NOx standard. So it would meet both of
5 the criteria that staff has set up to get funding in the
6 program.
7                The question is do you really, really mean to
8 carve out the money just for diesel, because that is
9 clearly not a fuel neutral policy. There's a bus right
10 outside the building here, there's actually two, a CNG bus
that meets 2.5. There's a propane bus that meets -- it's actually not even required to certify to low PM standard, because it's a gasoline derived engine from IMPCO.

So in addition to the four engines diesel-derived engines certified on natural gas, to the very, very, very low PM level, you have some other ones that are gasoline derived engines, that are available for school buses today. And they, because of the way the standards are set up, they are so low in PM that ARB doesn't even really test for the PM when they go through the emissions testing program.

The message you send if you give this whole $15 million to International for their Green Diesel technology to the other engine manufacturers that serve the market, which include Cummins, Detroit Diesel, IMPCO, Baytech and so on, is that you're carving out the money for diesel. It's not because you really want the PM reductions, okay. You're going to hear from at least one manufacturer today who is going to, or plans to, hopes to develop their natural gas engine to meet an extremely low NOx standard and the .01 PM in the same timeframe as the International Green Diesel engine is going to be available. Do you really want to tell that manufacturer don't bother because you can't get any share of this $15 million that's earmarked for International Green Diesel?
International was just up here and they said they 
welcome the competition. If that's true -- I think what 
they meant was we welcome competition from other diesel 
engine manufacturers of diesel engines. But if they 
really welcome competition and if you all really want to 
be fair and develop a market that's fair and encourages 
different technologies to come and try and get the 
absolute cleanest products into the marketplace for school 
children and transit buses and everyone else, then you 
really ought to be setting this up as performance 
standards.

Keep the $25 million pot with the 2.5 gram NOx 
cap for that part and keep a $15 million pot for .01 PM, 
and then throw it open and let everybody play. That would 
be the fair way to do it, but that's not the way staff has

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proposed it today, okay.

You're going to hear a lot more about that.

Thank you for the opportunity to speak and that's all I 
have unless you have any questions.

CHAIRPERSON LLOYD: Thanks, Greg. Any questions?

I know we'll hear some more.

Thank you.

MR. BROWN: I'm Chris Brown. I'm with Mendocino 
Air Quality. Thank you for taking me out of order.

CHAIRPERSON LLOYD: What is the note I've got,
that you can't work more than 12 hours a day. You can't
get paid for more than 12 hours a day.

MR. BROWN: Actually, I'm not supposed to be
driving a county vehicle for insurance reasons more than
12 hours a day, or after being up for more than 12 hours.
So I'm going to greatly abbreviate my
presentation.

CHAIRPERSON LLOYD: We suggest that you take a
nap and then --

(Laughter.)

MR. BROWN: There were times today where I was
thinking about that. I'm going to greatly abbreviate my
presentation to everyone's enjoyment, I'm sure.

You do have a copy of a letter from our board
directed to yourselves, which is dated last month. And

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there is also a copy of my presentation you should have
all gotten. One thing on the letter from our board, at
the time I was operating under the information I had
received at the incentive implementation manager's meeting
that the split was going to be a 50 percent population
split and a 50 percent needs-base split, specifically what
is your pre-1977 school bus fleet.

(Thereupon an overhead presentation was
presented as follows.)

MR. BROWN: With that in mind, here's some of our
pre-1977 school bus fleet. That is a 1968 Ford bus powered by gasoline. It would be eligible. With staff's help, we were able to include gasoline into it. There are two gasoline buses that I know of for sure in Mendocino County that are still in daily service. And I just saw a third one yesterday. And I quickly wrote down the bus number and I'm going to research that as well.

The particular bus is 1968. It's got more than 300,000 miles on it. It has absolutely no emissions devices other than a PCV valve and a PCV system. It has very high emissions of benzene, I can almost guarantee you. I don't need to go into the issues of what benzene will do. The particular bus is at the Willets Unified School District. As I said, it's in daily service.

And what I'd like to point out is Willets Unified is my third largest school district. I have 11 districts in my county. They do not have on-site refueling. They have to buy their fuel from a retail establishment. Their district, back in the early nineties, when they had on-site refueling, said, you know, there's a lot of liability, there's a lot of environmental concern, and a lot of maintenance that goes with aboveground and underground tanks, so we want to take those tanks out and we will rely on the market to provide our fuel.

They are not large enough -- they don't have the
space to put that facility back. So really they can't promise ARB that they're going to take low sulfur diesel, because they are contingent on what's going to be sold down the street at the two dealers in town.

And that is my third largest school district. I have seven others that are much smaller. And also my second largest school district, which is in the City of Fort Bragg on the coast. Second largest school district in the county does not have natural gas service anywhere within their boundaries. And so despite what you hear about natural gas, that's not an option for them. The option that's available for them in terms of a straight traditional alternative fuel is propane. And I'm glad to see that propane bus out there, again, today. I should take it to A-Z Bus Sales, I have a couple people who would like me to drive it back for them.

But that's not going -- CNG is not going to be an option for us. And so the diesel does have to stay part of the equation. Regardless of what standards you set for it, diesel has to be an option, because you're looking at 11 grams per brake horsepower hour on a lot of these older diesel engines. And despite what staff says, I would take great exception to the idea that a 1987 engine is just as clean as a 1967 engine. That's just not true.

The miles alone change the emission factors. And
if we went out there and checked those vehicles out, I
guarantee you you'd see a 1967 two-stroke is going to have
a lot worse emissions than a 1987. Now, what the
standards might have been may be different, but the real
world, there is a different emissions factor involved
there. And I have those engines. I have a lot of those
two-strokes.

CHAIRPERSON LLOYD: Chris, three minutes, what
can we do for you?

MR. BROWN: Real quick, I'd like to point out two
things. One is a document, this is from the Legislative
Analyst's Office, dated January of this year. And it
states, "Older school bus replacement program." I can
give a copy of this to staff. I didn't provide copies for
you. "Governor proposes a new $50 million older school
bus replacement program to be administered by ARB.
According to the budget," and, again, this is from the
Legislative Analyst's Office, "the intent of this program
is to provide grants to school districts to replace
pre-1977 buses with safe clean alternative fuel buses."
The 1987 number has been pulled out of the air by
staff. And I understand that that is a cutoff point for
diesel emissions. And I understand that there's a lot of
districts with newer buses that want to get those buses
replaced. I think that the Board should take the position
that they want to get pre-1977 buses off the road before any pre-1987 bus gets taken off the road. The emissions factors are much greater for those older buses. And I'd also like to point out a statement made by the Governor.

CHAIRPERSON LLOYD: Is this the last one?

MR. BROWN: I will have -- actually, if we could switch to the last slide.

--o0o--

MR. BROWN: But the statement made by the Governor is, "One of the reasons I ran for Governor is because I wanted to help every child in California, regardless of race, gender or geography, live up to their God-given potential." And to me that includes breathing clean air. And funding really should be based on need, not population. There's plenty of programs where the Board has said it's based on need and that it's benefited the larger districts, particularly South Coast, and that includes CMAC funding.

Our district does not get CMAC funding. We believe we don't have an ozone problem. Our children are exposed to toxics from the buses. We have the same type of problems as anyone else, even older buses. The other points are in my presentation, and I encourage you to take a look at that and read the letter.
from our board addressed to all of you.

Thank you.

CHAIRPERSON LLOYD: Thank you very much.

Any questions?

Thank you. We're going to take a 10-minute break. The court reporter needs a break.

(Thereupon a brief recess was taken.)

CHAIRPERSON LLOYD: I'd like to continue and I understand there's some time constraints, so I'm going to call Paul DeLong from Deere Power Systems.

MR. DeLONG: Shall we wait till everybody is here?

BOARD MEMBER BURKE: No, they can hear you in the back.

CHAIRPERSON LLOYD: Yeah, they can hear in the back.

MR. DeLONG: Good afternoon. My name is Paul DeLong. I'm manager of Natural Gas Engines for the Deere Power Systems Group. I appreciate the Board giving us the opportunity to express our gratitude for the particular program, because it will help our natural gas engine program.

We generally support the program. We believe it will reduce the exposure of school children to exhaust emissions. And we do believe that it is a very good
There are some disturbing comments that have been made in the staff report and in the other comments by the staff that natural gas engines do not have the capability or do not have the capability to meet the emission levels of clean diesel as far as particulate matter.

We do have an executive order from CARB for an engine that's certified at .01 gram particulate and 1.8 gram NOx. That does not happen to be on the web site yet, but it is an engine that we can do for school buses and it is a capable engine.

You do have my written comments. We also mention in there that by this time next year, we will be down around 1.5 gram NOx with a new control system that we will be putting on the engine. So those capabilities are there.

CHAIRPERSON LLOYD: When was the executive order written?

MR. DeLONG: I believe it was July, July or August, somewhere in that neighborhood. It just isn't on the web site yet.

The other concern we have is the misrepresentation of costs of natural gas engine versus a diesel. As far as the emission goes, you have a presentation of mine. If you look at page four, you'll
see that our certified engine 1.8 gram NOx, .01 gram particulate and the clean diesel engine against the regulations.

I'm not going to go through all of those slides, but as you go through to page four, you can see that to reduce the particulate matter on a diesel, you have to actually increase the particulates and then put a trap on it to reduce it to get the NOx down. That trap costs between $6,000 and $7,000 on the high side for installed. We've reduced the particulates with a simple oxidation catalyst at approximately a high side of a $1,000 installed. There is a method to get to low NOx on a diesel engine. It's being tested in Europe and some tests are running in the United States, that's injecting selective catalyst reduction. Those units are low volume, just as a natural gas engine is and they run around $25,000 installed. They were 35, they're coming down. That system is being used in transit buses in Europe. So if you compare the costs, if you go to page six, you can see for comparable exhaust emissions, the cost up for a natural gas school bus is approximately $26,000, with the tanks, the engine costs and a simple oxidation catalyst.

You can see that with diesel today, that engine would be a cost up of $32,000 for that vehicle. So
actually there's some money left over at the same emission level for a little infrastructure. So we think these costs are being misrepresented and the emission capabilities of natural gas and other alternative fuels are also being misrepresented.

Again, we'd like to express our gratitude for allowing us to make our comments and I will entertain any questions at this time.

CHAIRPERSON LLOYD: Now, Deere makes both diesel and natural gas engines?

MR. DeLONG: That's correct, but we don't make any on-road diesel. All our diesels are off-road.

CHAIRPERSON LLOYD: Professor Friedman.

BOARD MEMBER HUGH FRIEDMAN: I don't like the word misrepresented. I don't mind in error or erroneous,

but misrepresented to me suggests somebody is deliberately misstating with the intent to deceive or confuse. Who is it that you feel has misrepresented the costs?

MR. DeLONG: I'm saying some of the comments -- the costs where they're saying that the cost is higher, 33 percent?

BOARD MEMBER HUGH FRIEDMAN: I heard that from the staff. I'd like the staff to have the opportunity to respond.

The figures we were presented indicated that the
cost of a natural gas bus was somewhere about $30,000 more
-- 130 in that range versus a 100 or so for the diesel,
about 30 percent higher overall cost. The figures you're
showing here don't include the bus.

MR. DeLONG: The bus would be the same for both
of them; is that correct? I mean, the bus would be the
same as the chassis.

BOARD MEMBER HUGH FRIEDMAN: Well, I don't know
you're assuming that.

BOARD MEMBER WILLIAM FRIEDMAN: Well, you don't
have to buy all the diesel buses.

BOARD MEMBER RIORDAN: Mr. Cackette, I think, is
going to answer that.

BOARD MEMBER HUGH FRIEDMAN: Yeah, I was waiting
for the staff. They were conferring.

DEPUTY EXECUTIVE OFFICER CACKETTE: The numbers
that we used in the staff report are for the current two
and a half gram like natural gas bus, which is on the
State bid, you can go procure one for that price, versus
the trap equipped Green Diesel bus, which has also been
quoted on the State bid list. So we know what the two
cost today, but they're at those different NOx levels.

What this chart on page six shows is what would
it take to get the diesel bus's NOx down from three to
two. In that case, the witness says it's going to take an
SThatR system at the cost of $25 thousand. But that's not what we think any of the manufacturers are doing for 2002 to get the numbers down. They're all using what was said in the previous testimony, EGR, which has a cost that's more in the order of $1,000 than $25,000.

BOARD MEMBER HUGH FRIEDMAN: So you're presenting --

DEPUTY EXECUTIVE OFFICER CACKETTE: This comparison, I don't think is one that would, at least for a majority of the manufacturers wouldn't be what we think will happen in 2002 to put them on the same two and a half gram level playing field.

BOARD MEMBER HUGH FRIEDMAN: So you're presenting an assumed bus that doesn't yet -- diesel bus that doesn't exist?

MR. DeLONG: I'm presenting a diesel bus that does exist in Europe and that system that does work in Europe, just as we're presenting traps that are being tested in Europe and tested in the United States. And I'm also presenting data from two consultants, Southwest Research and AVL, that both attest that this is the most viable alternative today. And that also the natural gas engines --

BOARD MEMBER HUGH FRIEDMAN: But you don't make that?
MR. DeLONG: We don't make that.

BOARD MEMBER HUGH FRIEDMAN: You're not offering that. You're saying others ought to or somebody ought to be doing, but you're not?

MR. DeLONG: I'm saying that to say that the cost of a natural gas engine or bus is that much higher than a diesel, we're comparing apples to oranges here, when we're talking different emission levels, because we're --

BOARD MEMBER HUGH FRIEDMAN: It sounds like you're like comparing European and American, what's presently available here, which is what the staff has explained they've compared and you're comparing something very different. So it is apples and oranges.

MR. DeLONG: It is apples and oranges, because we are giving you -- offering you an opportunity to use an engine that is a low NOx and .01 gram particulate that meets two gram NOx standard and .01 gram particulate.

CHAIRPERSON LLOYD: So you can buy those today.

You're offering that, you're saying, with the oxygen catalyst on there?

MR. DeLONG: That engine was certified in year 2000. We can make it available for these school buses by July 1st.

CHAIRPERSON LLOYD: Mr. McKinnon.

BOARD MEMBER McKINNON: And you are clear, we've
budgeted $25 million for buying your type of --

MR. DeLONG: I'm just saying that there was some
misrepresentation on what a natural gas engine can do as
far as being at .01 gram particulate today. There's also
some propane engines also certified at that level by CARB
at .01 gram particulate, alt fuels.

I'm also saying that the costs that the latest
school bus study cost out -- I was at a meeting at South
Coast yesterday for $25 thousand dollars cost out, not 30.
It's coming down. Tanks are getting less expensive and
we're driving the engines down as well.

BOARD MEMBER McKINNON: I don't know if you heard
my opening remarks, but my starting point was zero for CNG
and zero for Green Diesel. It was all retrofit. That's
where I started. And I think you're at $25 million right
now.

MR. DeLONG: Okay, any other questions?

CHAIRPERSON LLOYD: Thank you very much.

MR. DeLONG: Thank you.

CHAIRPERSON LLOYD: I think we have Michael
Applegate.

MR. APPLEGATE: Good afternoon. My name is
Michael Applegate, and I'm the owner of Applegate Dredge
Company and the president-elect of the California Trucking
Association. My company is based here in the Sacramento
We run a fleet of 50 trucks, ten percent of which are powered by International's new Green Diesel technology. I'm a small business owner. And I'm committed to two things. First, I work hard to protect the jobs of my 130 employees. I know the families depend on me to keep them working.

Second, I believe it's essential to do my part to protect the environment. I consider myself somewhat unique. As a trucker, I purchase and operate heavy-duty diesel trucks. And I'm constantly searching and experimenting with cleaner fuels and cleaner engines. I've run aqueous diesel mixtures. I've run CNG. I've had magnets on my fuel lines. I've run fuel heaters. I've chemically treated air to cool it. I take some pride in operating some of the cleanest trucks on the road today.

I can tell you today that diesel users will help us reach the Federal Clean Air Act health-based standards for ozone and for PM, because of Green Diesel technology. That is why this year we invested in five Green Diesel technology powered trucks.

Diesel engines have the performance, fuel efficiency and reliability that I need to operate my business successfully. Not only do they cost less than the exotic experimental engines out there, but we can
always count on them to run safely and run for decades. The new Green Diesel technology trucks run as well as any of my traditional diesel engines and without the exhaust that we commonly associate with diesel. They're pretty remarkable. It would be difficult to have to choose between lower priced vehicles and a cleaner environment. Decisions like that would force us to weigh the long-term benefits of a cleaner planet with difficult or impossible economic costs of some of the more exotic type of technologies.

I'm a firm believer in caring for our environment. And as a business owner, I understand the dilemma too well. With the advent of International's Green Diesel technology we're spared from having to make that difficult decision.

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We can make the right economic choice and right environmental decision at the same time now. As I can attest, clean diesel is truly a win-win situation. Clean diesel provides us with a cleaner environment at a practical cost and eliminates soot by over 90 percent.

As your staff report illustrates, it was referred to earlier on page 35, "Dollar for dollar intermediate diesel buses will result in far fewer pollutants than natural gas powered buses."

As the State agency responsible for clean air, I
can see no better outcome than the cleanest air for the fewest taxpayer dollars. In fact, your staff report shows that if the State spent $30 million on the diesel buses, we would have 24 tons less particulates in the air and 172 tons less NOx than if the State spent the 30 million on natural gas buses.

That seems like a no-brainer to me. In fact, I don't know why we don't spend the whole 50 million bucks on clean diesel. It's a much better deal for the taxpayers and better health -- and better health benefit for school children.

The trucking industry's position is to put all of the money where the most ozone and particulate emissions can be reduced for the least cost. That means using clean diesel and practical diesel and diesel retrofit technologies.

One final comment, the technology works on all diesel engines. It's not just for International's diesel engines. I can put any particulate trap on any of my diesel engines in conjunction with ultra-low sulfur diesel fuel and have the same benefit, emissions benefit, that we get from today's Green Diesel technology.

CHAIRPERSON LLOYD: Thank you.

MR. APPLEGATE: Any questions?

CHAIRPERSON LLOYD: Thank you.
Now, we've got Nina Young, Peter Whittingham and Ted Holcombe.

MS. YOUNG: Good afternoon, Chairman Lloyd and members of the Board. Thank you for taking me out of order, I appreciate that.

My name is Nina Young. I'm the Director of Purchasing Contracts and facilities for the Orange County Department of Education. I'm a member of the South Coast Clean Air Partnership and a recent appointee to the South Coast Air Quality Management District's Adopt a School Board.

I'm here --

CHAIRPERSON LLOYD: Adopt a School Board?

MS. YOUNG: Excuse me, Adopt a School Bus Board.

(Laughter.)

CHAIRPERSON LLOYD: I don't think Dr. Burke wants to adopt anymore school boards.

(Laughter.)

MS. YOUNG: I'm giving your board a new name, Dr. Burke. I'm here today representing Orange County School Districts regarding the staff recommendation for the proposed implementation of the low emission school bus program. The Orange County Department of Education and the school districts within Orange County support the
staff recommendations for the allocation of the $15
million for Green Diesel, the $25 million for CNG and the
$10 million for particulate traps with additional language
that after the application process any remaining funds in
the areas of the split be rolled over to supplement
shortfalls in the other approved technologies. We would
hope that this would not have to come back to the Board to
expedite the process.

Additionally, we encourage the Board to eliminate
the school district match. The Governor's proposal did
not require a match. And school districts were not
informed of a potential match when they were developing
budgets last spring and prior to local board adoptions the
past summer.

With school district budgets as tight as they are

in the areas of unrestricted funds, it is an unrealistic
expectation that school districts would be able to find
the match required in their budgets. If our priority is
duhly healthy children, safe transportation and clean air,
let's not prohibit participation due to unnecessary
financial restraints.

I encourage you to continue to work with the
educational community and local districts to get the
results we are all trying to achieve. Your staff has done
a really good job at the public hearings that they held
this past fall. And they listened to the districts and their concerns with regards to the many issues that were raised.

We would encourage the Board to seek continuing funding beginning with additional monies that we anticipate will be a surplus in the State's General Fund this year and a minimum of $100 million allocated annually until all pre-1987 buses have been either replaced or retrofitted.

In closing, we support complete fuel neutrality and support the Board's concern in that area. We respectfully request you to allow school districts to choose the clean bus technology that not only meets State guidelines, but also is economically best for their districts.

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CHAIRPERSON LLOYD: Thank you.

MS. YOUNG: Thank you very much.

CHAIRPERSON LLOYD: Will you be eligible for funding from the South Coast AQMD if, in fact, you get that match so it wouldn't have to come out of your funds?

MS. YOUNG: Possibly, I'm not sure. Are you talking about with regards to the Adopt A School Bus Program?

CHAIRPERSON LLOYD: No. In terms of the match, the point is if you couldn't afford the match there,
presumably we'd send a fair amount of money down to South Coast, and maybe they could chip in there.

MS. YOUNG: That's a possibility. But the basin being as big as it is, with the number of buses there are, there's not going to be enough money to go around.

CHAIRPERSON LLOYD: Okay.

BOARD MEMBER CALHOUN: Let's me ask the staff a question. Ms. Young raised the same question that one of the other school districts raised. Is this generally true of the match problem for school districts in general?

EXECUTIVE DIRECTOR KENNY: We have heard from a number of school districts that prefer that the Board eliminate the match. The difficulty there is that we do have a limited pot of money here. We do have 24,000 school buses statewide and so we know that, in fact, the money will be oversubscribed.

By having the match, we thought it was a reasonable way of essentially extending the money, getting more new school buses into the fleet. I think one issue that she does raise, that we have to look at, is essentially the fact that we are in the midst of their budget year, and how do we essentially provide some level of flexibility for them to provide that match.

But, again, we think the match actually does provide benefits in terms of additional buses and
additional health benefits.

CHAIRPERSON LLOYD: Dr. Burke.

BOARD MEMBER BURKE: I wanted to say on this maybe what we could do is make the matching portion in the next fiscal year, so, you know, they give as a commitment to do it, then we can work out an arrangement with the bus company, so that if they want to buy it in 2001 they can pay them in 2002.

EXECUTIVE DIRECTOR KENNY: Well, fortunately we may actually have that working for us, because generally what happens is that it does take at least some period of time to get the bus once an order is put in for it. And so, you know, we are in a situation which the fiscal year would start and there would be an opportunity to essentially, you know, budget monies for it prior probably to the actual delivery of the bus.

So I think there's a way of potentially working the particular issue out. And that's why, you know, we were looking at at least maintaining the match and pulling some additional buses in.

CHAIRPERSON LLOYD: Yes, Mr. McKinnon.

BOARD MEMBER MCKINNON: Yeah. Kind of on the subject, I sort of -- I'm sympathetic to this too. If it was not in the budget, I'm kind of worried about it. I want to stretch it and get as much done as we can. But if
it wasn't in the budget, what worries me is that if we do
a population-based test and you don't have to match this
year, but then we know where it's all going and the
Mendocino that was just here doesn't get addressed.
And so if we're going to change the match
question this year and go to matches next year, we have to
think about how we equitably distribute the buses.
BOARD MEMBER BURKE: I wasn't saying -- you know,
what I was saying was, you know, give them a little
credit, demand it this year, but when you pay the match
can be adjusted.
BOARD MEMBER McKINNON: Got it.
BOARD MEMBER RIORDAN: So they would put it in
their next budget year, because realistically you're not
going to take delivery on probably these school buses

maybe not in the year that you ordered them. I don't know
how fast those buses come on line, but I can tell you some
big equipment items, fire engines, you order them one year
and they don't arrive until another year out.
BOARD MEMBER McKINNON: Thank you. That
clarified it, because I think, generally, I felt we're not
the school bus buying agency of California. That's not
our job. And so they should cost something. But if we've
been unfair vis-a-vis the budget, maybe we straighten it
out. But that clarified it a whole lot for me.
CHAIRPERSON LLOYD:  Thank you very much.

Peter Whittingham, Ted Holcombe, Mike Murray.

MR. WHITTINGHAM:  Good afternoon, Chairman Lloyd and Board members.  My name is Peter Whittingham.  I'm speaking today on behalf of Cummins Incorporated.  As you may be aware, Cummins is both the world's largest producer of commercial engines over 50 horsepower and offers the largest portfolio of low emission and alternative fuel vehicles of any manufacturer.

Cummins greatly appreciates the State's effort to protect the health of our young people through this ambitious and unprecedented program, a commitment that we shared and have been working towards as well.  However, we do believe that the proposal before you deviates from your Board's long-standing commitment to flexibility through true technology neutrality.

It is our understanding, as has been mentioned here previously, that only one manufacturer can currently provide a three gram brake horsepower hour NOx level diesel engine.  So we share the concerns voiced by others that this approach presents school districts statewide with a lack of appropriate options.

Cummins proposes that your Board consider the following, in conjunction with the current staff proposal.

One, to push back the proposed date whereby districts must
take receipt of new buses to June 30th, 2003.

California's procurement guidelines call for a period of up to two years between the time funding agreements are signed to initiate procurement and the actual delivery of the product. Cummins, and quite possibly other engine manufacturers, will be offering diesel school bus engines certified to 2.5 grams brake horsepower hour NOx level in the 2002/2003 timeframe.

Given that if your Board were to make no revisions to the proposal, actually delivery of these buses will still take up to 18 months from the date of purchase. We believe this amendment will provide greater flexibility to school district administrators and may yield even greater emissions reductions.

Two, remove all references to technology as it relates to funding under the replacement program. This allows the agency to provide funding for either alternate fuel or diesel where appropriate and compatible. That would keep your Board in line with previous CARB rulemaking efforts that emphasize a true technology neutral approach.

The step in conjunction with the previous amendment would also eliminate any potential concerns regarding sole sourcing and provides incentives for alternate fuel infrastructure development and procurement.
Though it's not directly related to the proposal before you, we would urge your Board to enthusiastically pursue a similar grant within the upcoming 2001/2002 State budget, as you have mentioned previously.

While the funding allocated to this program is considerable, the 400 buses proposed to be replaced and the 1,500 buses proposed to be retrofitted, the value of the program represented only a small percentage of the more than 24,000 school buses statewide.

With nearly one-tenth, 2,250 of these buses currently in operation of the pre-1977 variety, the need for additional funding is obvious. Cummins stands ready and committed today to work with you and other stakeholders in achieving the goal.

In closing, we appreciate your primary commitment to the health of the State's youngest residents as well as the recognition of the real world constraints and pressures facing both school boards and bus providers. We thank you for your consideration. And I'd be happy to answer any questions you may have.

CHAIRPERSON LLOYD: Thank you. Maybe I got it wrong, but you're suggesting that we slow the program down so competition can catch up?

MR. WHITTINGHAM: We're suggesting that you offer school districts the opportunity to choose which engine
they would like to provide. If they choose to select a
two and a half gram NOx diesel engine, that that
opportunity be provided to them.

CHAIRPERSON LLOYD: But do you have a three-gram
ingine at the moment?

MR. WHITTINGHAM: No. Cummins does not
manufacture a three-gram NOx.

CHAIRPERSON LLOYD: What about the particulates
when you're offering a 2.5 gram NOx, what's your
particulate number?

MR. WHITTINGHAM: Cummins would be meeting the
particulate level of the program.

CHAIRPERSON LLOYD: Which is?

MR. WHITTINGHAM: Well, for diesel you've got
.01.

CHAIRPERSON LLOYD: Comments from staff?

DEPUTY EXECUTIVE OFFICER CACKETTE: Just that,
you know, we thought there was pretty clear direction in
the program to try to get the money out and get the
cleaner, safer buses on the road right away, and we'd have
to wait another year or more for these buses to come along
compared to the ones that are available now. It just
seemed like it's better to put the energy into another
shot of money in the future budgets and get the money that
we do have now to get cleaner buses for the kids.
BOARD MEMBER ROBERTS: Allan.

CHAIRPERSON LLOYD: Supervisor Roberts.

BOARD MEMBER ROBERTS: I want to just pursue is
like going out to a car lot and buying a bus. Okay, there
is going to be some time involved here in the number of
buses you're talking about. There's going to be some
period of time the program is going to unfold over. I'm
kind of interested in what I'm hearing here, because what
I'm hearing is set the standard and let's figure out how
to meet the standard.

And I'm wondering under those -- if we were to do
that, how that program unfolds as compared to how it might
unfold if we were to adopt the 3.0 standard, which, I'll
just tell you, bothers me right now, so I'm trying to
figure out how we're going to make it work. And I'm not
sure that, I don't know what the time difference is,
because realistically, you're not going to run out
tomorrow and buy all these buses.

I mean they're not going to be delivered. You
might buy them, but they're not going to be delivered for
a long time. So somebody ought to be looking at it,
because this is the first person I've heard that stood up
and talked about diesel and saying that we can work with
you on the standard, instead of compromising the standard,
so that we have somebody that can place orders and we're
still going to wait for quite awhile before those buses are being delivered.

I want staff to be thinking about this a little more, because this is the first time that I've heard anything that gives me a little bit of comfort on what we ought to be doing with respect to diesels, because I'm not going to support a 3.0 standard.

CHAIRPERSON LLOYD: I think --

MR. WHITTINGHAM: Can I speak to that? I appreciate Supervisor Roberts' comments. And we generally agree that given a, perhaps, six month difference in actual delivery, why compromise?

CHAIRPERSON LLOYD: I think there's a little bit of a difference when you talk about setting standards and whatnot. In this case this is not a regulatory program.

We're trying to honor what the Governor wanted to do, get product on the road so that we can actually reduce the children's exposure to the diesel particulate as soon as possible.

And while you're saying maybe six months, and I understand Supervisor Roberts where you're coming from, a lot of this is, you know, it's expectations. So I think the tough spot -- I'm delighted to see Cummins coming forward also. And in this particular case moving forward, we are looking at a time differential. Now, you're
estimating six months. I'm not sure that we can guarantee that. Plus the fact that if we look forward and we're hoping that this is basically a drop in the bucket, that we're going to move ahead, clearly Cummins is going to be there for the longer term.

DEPUTY EXECUTIVE OFFICER CACKETTE: Just a comment on the timing. Of course, natural gas engines are certified now, so when you put in an order they have to know whether they can get an engine for that bus. And the answer would be yes, you can get one right now. And then the lead time is just however long it takes for that company to produce a bus.

The Green Diesel International engine is going to be certified in the Spring, so that would be first quarter of 2001.

You'll have to ask the gentlemen from Cummins exactly when they plan on certifying their Green two and a half gram diesel. But, you know, from what I know, it's going to be not spring of '01, but it's going to be a year and half or so later.

So the timeframe -- you can't -- you know, you can put an order in, but they can't build the bus until the engine is certified, is produced and then goes in the bus. So if he's talking about, you know, around the first of '03 then that means you'd be getting buses sometime
late in '03 versus being able to get buses late in '01 right now. That would be the way we sort of understand the timing.

BOARD MEMBER ROBERTS: I guess the issue, I mean if it were six months and if you're telling me we're going to put money in, the buses are going to be at 2.5 rather than 3.0 and I'm going to look at the lifespan of those buses, I'd rather take a little bit more time in getting those on the road and have the 2.5. There's no question about it, because I think you're going to make up that savings real quick over those given years that you're operating that kind of equipment.

DEPUTY EXECUTIVE OFFICER CACKETTE: We agree with you, but I don't think -- the point is I don't think it's six months.

BOARD MEMBER ROBERTS: Well, that's what we need to -- he's saying it is and you're saying it's not, so maybe you guys can get together and come up with an answer. I don't know what it is.

BOARD MEMBER HUGH FRIEDMAN: Well, why don't you ask him and let's get an answer.

MR. WHITTINGHAM: I do know that Mr. Cackette has conversations with Tina Voyavich of Cummins regarding the product outline and when that would become available.

Cummins is under the Consent Decree requirements to have a
two and a half gram NOx engine by October of 2002
providing different platforms in that timeframe and then
only amounts subsequent to that.

CHAIRPERSON LLOYD: It's about two years away.
This is probably not the most adequate forum to
discuss product rollout. But again, they are in the
Consent Decree and would be providing those in accordance
with the EPA guidelines.

CHAIRPERSON LLOYD: Professor Friedman.
BOARD MEMBER HUGH FRIEDMAN: Well, yeah, I wish
in a perfect world diesel would be as clean, in all
respects, as CNG. And we would have 2.5 or less. And I
don't know if you were here when International trucks
spoke. They, in their plan, were going to have 2.5 or
less in 2004.

But I do think we have an obligation to allocate
funds that have been appropriated so that they can be
spent for these purposes as soon as possible and get buses
on the road that are going to, in any case, dramatically
reduce emissions to the extent they replace existing very
old polluting buses, which is where most of the money is
going to go or to the extent that they retrofit the
existing polluting buses.

We're going to achieve good reductions from the
300 to 400 units that we're able to cover here. And my
hope is that we can get more money for next year. And assuming it works, we'll go through the same kind of process and maybe by then we'll have Cummins accelerating ahead of that Consent Decree. We may have International. We may find there are competitive forces at work that greatly facilitate our struggle here.

And it is true, when these investments are made, they're long haul, they're long-term, and I guess they're not easily then retrofitted again or reduced from three to two and half and so forth.

But it's not a perfect world. And sometimes, to me, the worst thing we can do is delay unduly. And I think we have an obligation to make a decision, however we wish it might be a little easier.

BOARD MEMBER ROBERTS: Could I -- I don't want to rebut, but I want to -- I'm not --

BOARD MEMBER HUGH FRIEDMAN: I invite it.

BOARD MEMBER ROBERTS: -- necessarily suggesting that we delay, but, again, what's bothering me here is this dual standards. And I've been on this Board for a fair number of years now, and it seems like since day one we've been setting dual standards for diesel. I mean diesel has, in spite of the way the world has changed, diesel has been kind of ignoring the reality. It wasn't our staff that said we ought to declare diesel a toxic. I
mean, there were a few members of this Board that decided to do that. That was not the staff recommendation, and we're all, you know, it's so accepted today.

It concerns me that there's a different standard there, but I mean we could still get the money out in the buses. Just as a for instance, instead of having the 15 million there with a different standard, you could have a single standard and say there's going to be 30 million or 35 million in that and you're going to put more in the retrofit, you can increase the retrofit. If you want to have a real impact, increase the retrofit and you'll get all the money out and you'll get buses and you'll take care of this year, but you'll have one standard.

CHAIRPERSON LLOYD: The only comment I was making, Supervisor, was that when you sit on the regulatory side, you usually give quite a bit of lead time. We've got now 50 million which we need to dispense over a very short period of time. Sometimes we don't have the same luxury or different -- slightly different viewpoint why we're trying to maybe deviate that from the standard procedure.

At least during most of the nineties, we didn't have the luxury of giving money away, certainly $50 million away. The Moyer monies were, I guess, starting up part of that program. But I hear you.
BOARDS MEMBER HUGH FRIEDMAN: If I could just add
my concern, though, with that is if you have a single
standard and it is below anything that is presently
achievable, other than by natural gas, then you don't have
a double standard, you have a single standard. And those
districts who aren't for a variety of reasons in a
position to take natural gas, they don't have the
infrastructure, they can't go down the street and buy it,
what are they to do except retrofit? And they can't
replace the old buses with anything.

And so as a practical necessity, we've taken the
next best thing, which is going to achieve great
reductions, at least as I see what the staff is proposing,
and we're going to take a slight variance from the
standard that we did establish and that we wish -- and

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this is what I meant by a perfect world, that we wish we
could insist on, but we don't have the time, unless we
want to wait for technology to catch up. And I don't know
what we do to these small rural districts, small ones.

CHAIRPERSON LLOYD: Yes. Mr. McKinnon.

BOARD MEMBER MCKINNON: I guess I also want to be
careful. I think that we're moving very strongly towards
changing the way diesel affects our air, I think, if you
look at the direction we've been headed in. And, yeah,
maybe it appears that we're being more flexible than we
should be in the early going, but it seems to me some of
it is trying to help -- I mean, I have a real problem
punishing a manufacturer that wasn't forced to do
something and planned their production a particular way
when they weren't forced.

And I also think that low sulfur diesel was
produced and created without there being a huge fight and
battle in the State, you know. Things are moving in place
that we can do something significant here. And if we have
a little bit of flexibility, I'm willing, you know, to
take the criticism. I think somebody in the LA Times
called us sell outs last week. And I was a little
offended by it, because my position has always been we
should retrofit. I've never said we ought to do, you
know, 100 percent CNG and fix 300 buses and leave, you

So I think you're right to hold us to being
staunch about the numbers. And if we're not, we're not
because we're consciously trying to move. And I, for me,
that's where it's coming from, is that I think we're
moving diesel and it's worth some flexibility.

CHAIRPERSON LLOYD: Thank you, Peter. You
stimulated some good discussion.

MR. WHITTINGHAM: Thank you.
CHAIRPERSON LLOYD: We have Ted Holcombe, Mike Murray, Jim O'Connell, Dave Smith, Ed Manning.

MR. HOLCOMBE: Hello. I'm Ted Holcombe with PG&E. Let me know if it starts to squeak here. Is that better?

Okay. First of all, there are times when I'm gladder to be here than over there. This might be one of them. But you have a delicate balancing act to do, and I appreciate the time and effort you're putting into it.

I do sympathize with the idea that I'd rather see money for diesels going to retrofits than to new diesels that will be around for 20 years. I'm a little concerned that some of those retrofits then might lead to repowering the engine, in essence, and keeping them for 20 years, too. So it's not a done deal that that's a win.

I'm a little concerned, too, about the concept of, you know, creating a special standard for the class of vehicles. The 2.5 standard is not an alternative fuel standard only. It's basically available to conventional fuels too, is it not? I guess it is. So that a diesel could meet that. The standard has been there for five years. They could have planned to meet it. They just didn't want to.

One of the things that makes the 3.0 real reasonable is the staff's analysis, which says that, gee
whiz, you're going to actually reduce emissions if you do that. But please recognize the footnotes, certification emissions, and not actual certification emissions, maximum allowed certification emissions.

If you change that number to 3.3 as the maximum allowed, and you're still certified to three, that equation would change just because of where you put the certification levels. If you drop the 2.5 down to 1.8, it would change again. Look at the actual in-use numbers. And when you look at them, look to see what's the composition of the PM that comes out, how toxic is it, what's the composition of the NOx that comes out, what's the NO2 to NO ratio? NO2 causes more ozone, NO causes less, or at least initially. I know it goes -- it's an equation.

CHAIRPERSON LLOYD: Be careful.

MR. HOLCOMBE: But there is still an initial effect. And that effect is what causes the highest concentrations potentially, so it's something to think about.

That's most of what I had to say. I did say that --

CHAIRPERSON LLOYD: Three minutes is good timing.

MR. HOLCOMBE: I'll let it end there.

CHAIRPERSON LLOYD: Could you just address the
price and availability of natural gas?

(Laughter.)

MR. HOLCOMBE: Well, you know, it's probably one of the things that PG&E doesn't want to brag about too much, but I think we still have some natural gas rates that are embodied in there. And just like electric rates, you can get them cheaper than the actual cost to us.

But seriously, it's always the law of supply and demand. And we have plenty of capacity to deliver natural gas. We have probably surplus capacity to deliver natural gas to California. And the pricing situation seems odd to me, but that may be reflective of our great success in bringing down SO2 levels on the east coast and by increasing natural gas, and also increased natural gas even here in California used for producing power.

CHAIRPERSON LLOYD: What about the price?

MR. HOLCOMBE: The price will equalize out. It will come back to where it was.

CHAIRPERSON LLOYD: What's the typical increase, percentagewise, that's all I'm looking at?

MR. HOLCOMBE: I'm not an expert in that and I really can't tell you precisely.

CHAIRPERSON LLOYD: Maybe Mr. Murray can answer.

MR. HOLCOMBE: Maybe Mr. Murray will know better than I will. I don't keep track of that. I'm an
environmentalist. I'm not a gas pricer.

Sorry.

(Laughter.)

CHAIRPERSON LLOYD: Thank you. Mike Murray, Jim O'Connell, Dave Smith, Ed Manning, and then Stephanie Williams.

MR. MURRAY: Well, after Chairman Lloyd's questions, I'm not sure if I should tell you who I work for. But my name is Mike Murray and I work for Sempra Energy, which is the parent company of Southern California Gas Company and San Diego Gas and Electric.

And I can tell you, if this was about electric restructuring and natural gas issues, we would be here for a lot longer than the four or five hours we're going to be here today.

But this isn't about that fortunately, and so I'll defer those questions to a later date. And I guarantee you, they're going to be debated at length by the best and the brightest in the state over the next 12 months.

I am kind of wearing two hats today. One, I'm wearing a Sempra Energy and we did submit a number of written comments to staff during the drafting of the guidelines. And I want to thank the staff, because a number of those comments were incorporated and we
appreciate their efforts in putting together the
guidelines documents.

We are also a member of a coalition called the
Clean Machine For Kids, which I believe you have a letter
from us today along with four bullet points. And it lists
the coalition members. They are a broad-based coalition
representing engine manufacturers, natural gas fuel
providers, refueling station manufacturers and a number of
transit agencies. And I just want to briefly go over the
four points, because a lot of it's been discussed today
and I want to really try to keep my comments to less than
a couple minutes.

One is we do believe that the NOx standard ought
to be kept at 2.5. I think that that's a fuel neutrality
issue. We believe that the standards should be set and

that everyone should be able to compete to those
standards. So we feel that that levels the playing field.

In response to Board Member Friedman's comment
about the rural areas and about the areas where natural
gas may not be available because the infrastructure is not
there, there might be other fuels out there besides clean
diesel that can meet -- liquid fuels that can meet the
2.5. It's my understanding that propane can do that now.
So you're not just precluded in these rural areas to clean
diesel. There might be some liquid fuels that you could
store out there and meet those numbers.

The second issue is the certification of diesel engines. And this is more a question. On the staff report on page 21, there is a comment made that said, "Although rarely done to secure eligibility for State grant funds, it would be possible to certify these 3.0 gram horsepower engine levels using the federal process."

And I guess our question was in that caveat about "although rarely used", we question what is the need to use that process or the urgency and just -- that was more of a clarification question from staff.

The third thing we'd like to talk a little bit about is the process for the funding allocations. One of the things we have been promoting is that you have the three pots of money and that there will be an ability that

if funds are undersubscribed in one particular fund, they could flow over to funds that are oversubscribed. We see that in the staff report that that is, in fact, the case. But a couple questions arise that we would kind of like discussed.

One is what happens if the clean diesel is not certified by next April 1st, which is, I believe, the deadline on the staff report? I believe it's on page six when the actual schools have to apply for the funding. In other words, if it's not certified by next April 1st, does
that $15 million automatically roll over into the other pots? That's not clear.

And then there appears to be some bit of confusion on the actual time the funding is reallocated. On the table on page six, it appears that it's January 1st 2002 when the That gets to reallocate the funds. And in the staff report on page 15, it's July 15th, 2001. So I think we need to clarify that point, as well.

And then the final comment I'd just like to talk about is the CNG cap on the infrastructure. The staff recommends in a number of places in the report that they suggest a ten percent cap on the infrastructure, in other words, about two and a half million dollars. And we would suggest that that would be more as a guideline. There might be sessions where you may need a little more money to get the infrastructure built. There might be a little less. And setting it at ten percent may preclude some very good projects from going forward.

So we would just suggest that rather than set the cash at 2.5 million or ten percent, that it would be based on a case-by-case basis, and the administering agency would make a determination based on whatever considerations on how much should be allocated for infrastructure.

CHAIRPERSON LLOYD: Thank you. Maybe staff could
address at least two of the points there. That's on the federal certification compared to ARB and then the other issue about the timing.

ON-ROADS CONTROLS BRANCH CHIEF KITOWSKI: Yeah, on the federal certification, the emission standards that the Air Resources have is that four grams is our conventional standard and then the optional standards start at two and a half. However, the federal government does have federal emission level standards at various levels. And we can tap into those and we can make them enforceable in contracts.

The point about, although rarely used, was simply a reference to the fact that in Moyer and in other incentive funds, we've always fundamentally relied on the optional emission standards that would start at two and a half. And we have not done that in the past, although we can do it.

BOARD MEMBER CALHOUN: Let me ask another question in connection with that.

CHAIRPERSON LLOYD: Yes, Mr. Calhoun.

BOARD MEMBER CALHOUN: Are we tracking the certification of this particulate? That was one of the questions that went through my mind is what happens if the medium doesn't get -- how do we know they're going to certify, are we tracking the certification of this engine?
ON-ROADS CONTROLS BRANCH CHIEF KITOWSKI: We are tracking it. Every indication we have so far is that it will be certified prior to -- well, prior to that time and that maybe -- I think Mike is going to add a point here.

EXECUTIVE DIRECTOR KENNY: The question with regard to if they're not certified by April 1st, what we would do is we would actually take the $15 million and bring it back to this Board for redistribution.

CHAIRPERSON LLOYD: Thank you.

Yes, Professor Friedman.

BOARD MEMBER HUGH FRIEDMAN: Just a quick question. I'm a long time customer of Sempra and I'm curious about why you're down here as neutral. You don't make diesel, but you do make natural gas. And you're potentially benefiting from the half that's been allocated from natural gas. The only part you're opposed to is the part that wasn't out there.

MR. MURRAY: What I would have done is put down support if amended. I just didn't see that opportunity, so I --

BOARD MEMBER HUGH FRIEDMAN: I wanted to be sure I understood where you were coming from.

CHAIRPERSON LLOYD: The next is Jim O'Connell, Dave Smith, Ed Manning, Stephanie Williams and Pam Jones.

MR. O'CONNELL: Chairman Lloyd, good afternoon,
members of the Board. I'm Jim O'Connell. I'm vice president of A-Z Bus Sales.

And, first off, I'd like to say that I think staff has done a remarkable job of trying to pull all the factors together here and really bring some things to you. We support the Governor's program and we'd like to see it continue. Obviously, we sell buses and that's a very important part of what we do.

We're concerned by the ARB's position to vacate the long-standing approach to optional low NOx, concerned that acceptance of a federal standard rather than maintaining California's more stringent expectations for emission levels and air quality exists within the decision. Now, we think that the 2.5 NOx position is the appropriate one, and that even though we do sell diesel engines the International engine is not available to us. It's proprietary on their part at 3.0. And so you're going to have one manufacturer who's going to be able to provide that.

We feel that there's a lot of competition on the alternative fuel side, in terms of CNG. We offer to you a 1.5 gram NOx propane engine on the vehicle that's outside, and two and a half standards for other propane engines that are also available in school bus use through Cummins.

So there are certainly competitive engines and
other kinds of things on the alternatively fueled side.
And I think Cummins engine company's representative said
it best when he said that they'd like to come to the
party, they're just not able to do it now. I'd like you
also to consider that John Deere, other manufacturers,
including Cummins on the alternative fuel sides, did
accelerate to a 2.5 optional low NOx, and did accelerate
their, whether you want to call it a market or their
process in terms of bringing engines forward and they
spent million of dollars in doing it.
They are not reaping any reward for doing that at
the point in time based on your decisions here. The other
thing is that with a $30 million, $20 million split as you
had originally decided with regard to particulate traps
and other PM traps, that your original proposal provided
for some very interesting opportunities, a 30/20 split.
What I'd also like to tell you, so I'm kind of
floating a balloon here, but there's about 55 million
gallons of diesel fuel used in school buses each year.
And if you take the differential between ultra-low NOx --
or ultra-low emissions -- or I'm sorry, ultra-low sulfur
diesel at a nickel to seven cents taxed, that you might
end up with about a $4 million a year price tag to mandate
all districts to use low sulfur diesel. That might be a
part of your program.
Thank you.

CHAIRPERSON LLOYD: Thank you.

Ms. D'Adamo.

BOARD MEMBER D'ADAMO: How does propane compare to CNG in terms of infrastructure costs?

MR. O'CONNELL: It's significantly less. In fact, there are some propane suppliers that will actually supply the infrastructure to you so that you can simply put a fuel tank there and refuel your vehicle right on site at very low cost.

BOARD MEMBER D'ADAMO: Does staff have anything to add to that?

You'd agree with that?

I think when Chris spoke from Mendocino, he's as unique perhaps as Santa Barbara Air Pollution Control District. They both have strong interests in propane fuel. And actually the IMCO certification from the Executive Order is .9 grams per brake horsepower.

CHAIRPERSON LLOYD: What about particulate?

MR. O'CONNELL: It's a gasoline engine. I do not know the particulate at this point in time.

ON-ROADS CONTROLS BRANCH CHIEF KITOWSKI: Particulates have generally been very low, with the propane at or lower than CNG levels.

CHAIRPERSON LLOYD: So it's a good alternative as
MR. O'CONNELL: It definitely is.

CHAIRPERSON LLOYD: What about A-Z Bus Sales, what sort of part of the market do you have?

MR. O'CONNELL: We have a significant part of the market. We represent Bluebird Body Company. They're the largest complete manufacturer of school buses. They use a lot of International chassis for their production. However, the particular engine is not going to be available in the size of chassis that we use, so that I don't think we've got that opportunity to use it.

We have delivered nearly 700 alternatively fueled CNG school buses to California. We have a significant -- well, we have the near total share of the CNG school bus market at this point in time. We're really proud of that.

We started earlier, took our lumps and we continue to work with several of the air districts to continue to develop that technology.

CHAIRPERSON LLOYD: Would you say you can't get the International Green Diesel engine to put in your chassis?

MR. O'CONNELL: That's correct, not for the particular platform.

CHAIRPERSON LLOYD: Okay. Yes, Ms. D'Adamo.

BOARD MEMBER D'ADAMO: Perhaps I should have
explored this further. If staff could respond on the difference between propane and CNG in terms of cost of the bus, and also where would it fit in? It's not CNG, it's not Green Diesel.

ON-ROADS CONTROLS BRANCH CHIEF KITOWSKI: It would fit in with the two and a half category. It was an alternative fuel requirement, so it would fit in there. And you may be in a better position to talk about the cost specifically on the propane.

MR. O'CONNELL: Sure. The cost differential is probably under $10,000.

BOARD MEMBER RIORDAN: More or less.

MR. O'CONNELL: More or less.

BOARD MEMBER RIORDAN: No, more or less?

MR. O'CONNELL: Ten thousand dollars less, I'm sorry, than it would be for -- it would $10,000 additional over a diesel installation.

ON-ROADS CONTROLS BRANCH CHIEF KITOWSKI: About half in between a diesel and a CNG.

BOARD MEMBER D'ADAMO: And what about in terms of availability throughout the State, are there certain regions where propane would be more available or is it pretty much equal throughout the State?

MR. O'CONNELL: There are certain areas where propane would be more available than less available.
Propane is a great alternative. It's typically available just about anywhere. The problem is motor fuel and there are some significant issues with regard to motor fuel. But I think staff would have to take a look at that. And I can't speak to that. I can only tell you that I got the vehicle.

CHAIRPERSON LLOYD: I'm aware of the issue.

MR. O'CONNELL: One other thing, and I'm sorry to take -- I've been up here three minutes, but I would like to say that we have worked with several of the air quality management districts and they work closely with the California Energy Commission. We would advocate that those districts be allowed to continue to work and perhaps administer some of these programs in their areas and that they might also have some innovative options in terms of actually extending some of these funds.

I mean, to say that some of our air districts don't have matching funds available, but they might incentivize school districts to utilize some of their monies for other options. So we'd like you to consider that.

CHAIRPERSON LLOYD: Thank you very much.

Dave Smith.

MR. SMITH: Mr. Chairman and board members, I'm Dave Smith. I work for BP/ARCO and I'm here in a
favorable position, as compared to last month, and support
your proposal.

(Laughter.)

CHAIRPERSON LLOYD: You were an hour last month, so don't count on it again.

(Laughter.)

MR. SMITH: I won't. Actually, I'm just here to answer one of the questions you asked, Mr. Chairman, about the availability of low sulfur diesel fuel. BP continues to make available over a million gallons a day of low-sulfur diesel fuel. Within the last couple of months, we moved over 50,000 gallons or two million gallons of the low-sulfur diesel fuel up from the San Francisco Bay Area, so it's commercially available in northern California as well as southern California now.

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CHAIRPERSON LLOYD: Roughly, Dave, what percentage of your total sales are roughly?

MR. SMITH: Well, currently, percentages are very small. But that production rate can be up to about 40 or 50 percent of our overall production. We can't maintain that, but there is a demand for it right now. We do have contracts with transit and school systems, and we've been getting quite a bit of interest in northern California transit districts in going the diesel pathway on your urban bus rule.
So just to conclude, we're supportive of your rule. We're supportive of the guidelines. And given the guidelines, we look forward to working with you next year in trying to get additional funds in the Legislature to continue this program.

Thank you.

CHAIRPERSON LLOYD: That support is much appreciated.

Does the staff capture the price differential? I think they said three to five cents or five cents. Inasmuch as there really isn't a market, price and demand, BP agreed we're selling low-sulfur diesel at five cents over CARB. We're agreeing to that for at least a year in our contracts with people. Hopefully, within the next year, other oil companies will come into a market and there will be a real market price supply issue.

CHAIRPERSON LLOYD: Thank you.

BOARD MEMBER CALHOUN: I've got a question.

CHAIRPERSON LLOYD: Yes, Mr. Calhoun.

BOARD MEMBER CALHOUN: As a fuel supplier, does it matter to you whether the standard is two and half or three grams?

MR. SMITH: Mr. Calhoun that's a dangerous question. We understand the complexities and the balances that the staff was trying to meet and we certainly support
the way they've approached it.

I'd like to mention that BP is one of the largest suppliers of natural gas to the State of California, I found out just a few weeks ago, which surprised me. So we're glad to see that all fuels are being given a chance through the program.

BOARD MEMBER CALHOUN: Thank you.

(Laughter.)

CHAIRPERSON LLOYD: So you're, in fact -- you support both --

MR. SMITH: That's right. We're very supportive of that.

(Laughter.)

MR. SMITH: And Dr. Burke isn't here, I don't know what's wrong.

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(Laughter.)

CHAIRPERSON LLOYD: When did you see the light?

(Laughter.)

MR. SMITH: Tuesday when I met with Dr. Burke.

(Laughter.)

CHAIRPERSON LLOYD: Thank you very much.

Ed Manning, Stephanie Williams, Pam Jones, Scott MacDonald.

MR. MANNING: Thank you, Mr. Chairman, members of the Board. It's nice to be here again.
After hearing Dave's testimony, I'm reminded of John Lennon's statement, "Give peace a chance."

(Laughter.)

MR. MANNING: There has been an acrimonious debate, part of an ongoing acrimonious debate. But I think when you step back and look over the last two years after diesel particulate was listed as a toxic air contaminant, to where we are today, actually, there's been pretty monumental progress. And I think you have to look at the program quite frankly as part of that progress.

Last year, the Board took a major first step on the transit bus rule in doing two things really, advancing clean diesel technology and allowing alternative fuels to participate at the same time, all towards the goal of driving down emissions in both PM and NOx emissions.

And I think in response to some of the questions posed by Supervisor Roberts and some of the debate, if you look at the transit bus rule, I think it has a lot of parallels to the rule. In the transit bus rule, you had fuel neutrality. You had both clean diesel and CNG participating, as well as fuel cells and other technologies. You had local choice, which this rule also has.

The other thing is you look at the emissions comparison. In that rule there are times when diesel
pulls ahead of CNG and times when CNG pulled ahead of
diesel as part of that proposal. That is not dissimilar
in many respects to what's in front of you today.
Under the proposal, the certification level for
clean diesel for particulate is lower than for CNG. That
is significant. And in our view, going back to one of the
questions Professor Friedman asked earlier, there was an
extensive discussion in the budget process last year, the
details of which I and other people could bore you with
and perhaps entertain you with, but you don't really need
to get into, except to say that it was understood that A,
in our mind, this was first and foremost a particulate
reduction program, and I think politically was sold as
that. Not that NOx issues weren't important as part of
the debate, they clearly were, as global climate changes
issues and other issues have been loaded onto this over
time, but primarily we viewed it, and think a lot of other
people did, as a way to reduce PM reduction -- to achieve
PM reduction and also NOx reduction.
The other thing that I think you look at in the
proposal is this is a zero sum game, in that you have
finite dollars to allocate and you're looking at how to
get the most effect for the dollars that you have. And
you can debate whether it should all go to retrofits,
whether it should all go to CNG, which would give you the
least amount of benefit, whether it should all go to new
clean diesel buses. A lot of school districts want new
buses.

But this is what we have described as an elegant
compromise, one that probably equally offends all, which
means it's probably on to something not unlike other
compromises that have come before the Board. And that is
not meant to be -- it's not meant to be trite. I mean,
it's a difficult issue with complex -- you know, you're
looking to balance fuel sources, achieve reductions for
particulate specifically, but also for others while you're
there, and how do you do all that. And that is not easy
do.

I participated, as did others from the business
community, in extensive discussions about the 3.0 NOx

level. I will say that, you know, no good deed goes
unpunished. Navistar was the only one that I saw to step
up. And, you know, I think you're trying to achieve
progress immediately and this is perhaps the best way to
do it.

And our companies, WSPA member companies who I'm
here representing, have been participating on an
individual basis with Air Resources Board staff to make
the commitment to provide the clean diesel fuel. And you
just heard Dave Smith's testimony on that, so we will
continue to participate in the process. We think this is one step along the way really towards implementing a much more ambitious goal, which is really your diesel control plan, which we think will present other challenges as we move forward.

But we and others I know in the business community, the Chamber, the agricultural community, the engine manufacturers, are at the table and are going to continue to be at the table to make it work.

Thank you very much.

CHAIRPERSON LLOYD: Thank you very much.

Comments, questions?

Thank you.

Stephanie Williams, Pam Jones, Scott MacDonald and then V. John White.

MS. WILLIAMS: Good afternoon. My name is Stephanie Williams. I'm the Director of Environmental Affairs for the California Trucking Association.

(Thereupon an overhead presentation was presented as follows.)

MS. WILLIAMS: We are opposed to this proposal today, but tomorrow we're supporting MTE, so we hope you understand.

CHAIRPERSON LLOYD: No.

(Laughter.)
MS. WILLIAMS: I have to be smarter than the button and I'm not, what do I do?

MS. WILLIAMS: The trucking overview. The CTA members have not been politically active on school bus issues and will be not in the future. There was a Los Angeles Times article which upset our members and brought our President Elect here today for the hearing. And that is the article and the editorial which inaccurately depicted natural gas engines as necessary to reduce ozone and particulate matter in the South Coast basin.

Our members want to set the record straight regarding federal criteria pollutants addressed in this proposal, particulate matter and ozone precursors. That's what the fed expects us to do, meet these health-based standards. That's why we're all here.

The precedent of letting natural gas pollute more particulate and ozone precursors threatens attainment of our health-based standard in the State.

The South Coast AQMD, based on diesel particulate being bad and natural gas particulate assumed to be, you know, good for you, has proposals like the 54 percent reduction in NOx beyond what natural gas is, and a 71 percent more reduction in PM emissions. It discriminates against clean diesel technology and allows CNG engines to
emit four grams NOx and be subsidized under the program.

We have a problem with that.

MR. WILLIAMS: Also, when the California document was finalized listing diesel as attacked, the National Resource Defense Counsel sued four of the largest grocery stores in southern California. Did the settlement reduce particular emissions, overall particulate emissions, those emissions that federal EPA will say yes, you met your health-based particulate standards.

No. This suit was settled almost two years later. The were required to purchase dual-fueled LNG diesel engines to reduce particulate because of the listing, but the PM emissions on these new engines that cost $35,000 more were no different than the 1994 diesel particulate emissions. And they had to pay $800,000 in attorney's fees. That would buy a lot of diesel trucks, clean diesel trucks.

We have a problem when proposals are not fuel neutral. We urge you to move to fuel neutrality.

Promoting higher emission standards for an emerging technology, be it natural gas, propane, you know, fuel cell for ozone is a problem, because ozone precursors are nonmethane hydrocarbons and oxides of nitrogen.

The federal standards for diesel and anyone
competing in that area for 2004, are nonmethane --
nonmethane hydrocarbons plus NOx. You've got to meet that
standard to reduce ozone. That provides an incomplete
comparison of the health and environmental risk. It
ignores respiratory, cardiovascular, global warming,
carbon monoxide. Spark ignition technology is no panacea.
It emits a lot more than between 10 and 16 times. Six
times would be the low level that we'll using in the slide
coming to you, not to mention that potential greenhouse
gases. It ignores nonmethane hydrocarbons, which is our
biggest problem today.

--o0o--

MS. WILLIAMS: Here we have a slide that shows
natural gas versus diesel engine. You have a 600 percent
increase in carbon monoxide and 200 percent increase in
nonmethane hydrocarbons. And a recent Department of
Energy study shows that ozone increases in Los Angeles on
the weekends. Because trucks are off the road, NOx
becomes lower and the nonmethane hydrocarbons reacting
with the sunlight actually increase our ozone, which we
are measured for federally. We get measured on ozone, not
NOx, not nonmethane hydrocarbons.

--o0o--

MS. WILLIAMS: There was recent studies that show
that diesel particulate is no more toxic than the natural
gas particulate in Sweden.

CHAIRPERSON LLOYD: Three minutes has passed awhile ago.

MS. WILLIAMS: A lot of people have seen this Swedish study, CNG at best. Diesel plus the particulate is lower.

Our conclusion, we support EPA's promulgated standards for diesel for 2006. We are fighting for them nationwide. Please make natural gas meet that same .01 and add nonmethane hydrocarbons into the NOx standard to be consistent with the federal government.

Thank you.

CHAIRPERSON LLOYD: Any questions from the Board? Comments from staff?

Pam Jones, Scott MacDonald, V. John White and

Bonnie Holmes-Gen.

MS. JONES: Good afternoon. My name is Pam Jones and I'm here representing the diesel technology forum, which is leading manufacturers of engines, both diesel and CNG, as well as fuel and after-treatment emissions control devices.

I'd like to ask for your consideration of four areas. Number one, continue to include clean diesel in the mix to solve the problems with the school buses. The main thing is to get the older buses off the streets and

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to clean up the emissions of those existing buses.

The school district should have the flexibility to decide what their needs are for durability, reliability and cost. And you've heard from your own staff that clean diesel does meet the requirements, it does it at a cost that will allow the school districts to add filters to buses for the cost of one new bus. That's not insignificant to these school boards.

Number two, continue to acknowledge the progress that the clean diesel industry has made. I don't think you should be considered sell-outs for accepting your staff's proposal in looking at the aggregate benefit of a combination of these two fuel choices.

Very often the CNG proponents are critical of the diesel industry and compare CNG emissions to old diesel technology. That's not the case today. You heard about a study of in-use traps in San Diego that reduced emissions levels to near zero. There's another study, recently, by the National Renewable Energies Laboratory and ARCO that concluded the same thing, that's in-use RealTime.

Third, don't sanction a monopoly either of the bus companies or the fuel choice. Don't endorse a funding program that limits money awards to just one company.

There are other players as you heard who do want to
participate. And while they're not there now, they will be. Encourage competition as more companies meet those standards.

Additionally, I would urge you to be cautious about endorsing a system that awards money and allows southern California to promote a monopoly of only one choice, that being CNG.

Diesel engine companies have spent millions of dollars to meet your standards. And to exclude them from any area geographically or functionally would be highly unfair.

Number four, we ask that you make it clear to the school boards in your directives to them that they are not being asked to sit as a board of toxicology. We've seen in the transit hearings that they're very confused when they're being presented with conflicting information, CNG and diesel. And they feel very uncomfortable being asked to make the health decisions that they are presuming that they need to make, so we're asking that you be more clear that your staff has undertaken health and environmental studies and determined that the two paths are equivalent in reaching your standards.

Again, I don't think you are sell-outs for considering both paths. And I think that you will get the best bang for the buck and the most clean air for the buck
11 if you follow both of these paths as stated in the staff
12 recommendations.
13             Thank you.
14             CHAIRPERSON LLOYD: Thank you very much.
15             Questions or comments?
16             Mr. McKinnon.
17             BOARD MEMBER McKINNON: The staff. Has CNG
18 emissions been studied the way diesel has? I'm not making
19 that a matter to be resolved today, but if it's the case
20 that it -- we really need to probably think about doing
21 some work.
22             EXECUTIVE DIRECTOR KENNY: We do need to do more
23 work in that area. We know much more about diesel.
24             CHAIRPERSON LLOYD: Thank you very much.
25             Scott MacDonald, V. John White, Bonnie

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talking about today for school buses is consistent with the established Air Resources Board policy and makes sense as a way to allow all districts in the state a chance to clean the environment for their students. With a clean diesel option, you give school districts a chance to protect the health of thousands of more kids. Your own staff report on the issue shows that dollar for dollar clean diesel buses will remove hundreds more tons of pollutants from the air than CNG buses. If clean air for kids is really the goal here, then school districts should be given a clean diesel option. A couple of more quick points on the handouts you just received. There's a bar graph showing the results of the real world San Diego City school test of clean diesel school buses and the difference between those emissions and the emissions of the dirty diesel buses that we're trying to get off the road. As you can see there was serious reductions in important pollutants and we're hoping that this kind of real world test makes it clear that this is an option that should be made available to all school districts. Secondly, there's a question earlier in the presentation today by your staff, that the South Coast Air Quality Management District is requesting that the money only be made available for CNG buses in that area, again.
I'd like to read you a list of our school districts who are a part of our group. The California Association of School Transportation Officials, Riverside County Schools Advocacy Association, Orange County Department of Education, Unified School Districts in Beaumont, Irvine, Murieta Valley, Newhall, Ontario, Monte Claire, Roland, Walnut Valley, William That Harte, and the Transportation Supervisors in the Covina Valley and the Santa Ana Unified School District. They are pleading for fuel neutrality, so that they can give their students the most clean air bang for the buck. And we're asking you to support them in that position.

Thank you very much.

CHAIRPERSON LLOYD: Thank you.

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Question, Mr. Calhoun.

BOARD MEMBER CALHOUN: I don't have a question for him, but I want to go back to something the Matt McKinnon was mentioning a few minutes ago, and that is about the emissions from natural gas and the comparison between those of diesel fuel. And I think we ought to take a serious look at it. Now Stephanie Williams was up here a few moments ago and she mentioned this also. And that I notice in looking at the press release that they issued saying that "Truckers Champion Green Diesel,"
"Challenge Environmental Lobby to 'come clean'' and talk about the emissions from natural gas. I think we ought to take a real good look at that and expose whatever results we find.

DEPUTY EXECUTIVE OFFICER CACKETTE: I would just comment, that we are testing right now natural gas and diesel engines at our MTA facility and we're going to be doing fairly detailed work on that. So there will be more information available later.

CHAIRPERSON LLOYD: Thank you. Next is John White. And I think we've got to thank John for all his efforts to actually get the $50 million that we're squabbling over here in some ways.

MR. WHITE: Thank you, Mr. Chairman. John White today representing the Sierra Club. I want to first of all thank the Board and the staff for all the time they've spent on the issue. I'd actually prefer to spend more of our time working on spending the money and getting money than having quite the level of detail on allocation, so I want to put this in a little bit of context.

On the other hand, I do think that I agree with my friend Ed Manning that this is reminiscent of the transit bus rule. But unfortunately this is not a rule, this is a procurement. And that's where I'd part company with Mr. Manning, although, I am fond of sharing much in
common with the views. I am particularly gratified to hear of the evolution and the thinking of BP ARCO on this subject.

But I think that the essential point that I am troubled by is we have given undue deference to the market share considerations of one company in this procurement. And I have no desire to demean the accomplishments of International. Quite the contrary, I only wish they would offer that engine as a repower, so we could use it in Sacramento and LA on the truck market, but instead they're not offering it as a repower as I understand. I'm told that they refuse to offer the same engine as a repower, which is actually where it would be a terrific achievement.

Instead, it's only offered as a school bus, which is a narrow niche market. And essentially what we're doing is we're allowing a less clean engine to receive advantages over a more clean engine. So that's my concern.

So I think if there is a requirement to have to have a certain allocation to the company because of how hard they've worked, that allocation ought to be smaller than 15 million, certainly, given the state of preparation and certification and so forth. And I'd put the difference into, agreeing with South Coast, I'd put it
I think that the problem that's come here is that we've sort of, because the public money is going to be very helpful in the marketing of the vehicles and we've sort of confused ourselves that we're defining who can sell a particular product as opposed to who we're going to help the most. And to me we should help the most that one that's doing the most good.

And so that's my complaint with the regulation. On the other hand, I want to see it put in context and have us move forward overall, but I think it's troubling when we seem to have felt the need to have a policy that guarantees outcomes. And, in fact, to me the policy we should be striving for is to move the alternative cleanest fuels to everywhere we can and enthusiastically put the clean diesel and the less clean technologies everywhere else, because we know that CNG isn't going to go everywhere.

Propane. I was pleased to hear about it's competitiveness and opportunity to apply. We know that not every school district can handle the alt fuels infrastructure. So to me the policy preference should be clear for CNG, but it should be flexible. And I'm disappointed that we weren't able to get to that outcome here today and would urge the Board to give all of the
testimony and all of these discussions its full consideration.

But I want to thank the staff for working hard. I just think we ought to think of procurements differently. To me the clean should go first, the less clean should be participating, but not have the same advantage or encouragement. And they should be, I think, encouraged to go into other markets where we need them more. We, frankly, don't need them in school buses quite as much as we need them elsewhere.

So anyway, thank you for the time to listen and I'd be happy to answer questions.

CHAIRPERSON LLOYD: Thank you very much, John. I would like maybe to ask International, whether, in fact, that's true, that they're not interested in the repower market.

MR. WHITE: I think it's a matter of where the scarce number of engines can go. I called to get some guidance on the discussion today, because as you know we have a somewhat different emphasis in the north and south, and repowers are very important.

And I just don't want to see the clean diesel going where the CNG can go. I want it to go where the CNG can't as easily. And that's where I think we should hit for a policy as we go forward in the future.
Thank you.

CHAIRPERSON LLOYD: Mr. McKinnon.

BOARD MEMBER McKINNON: I don't have a problem with what you're asking there. And he's coming now. Do you happen to have any information about the alternative fuel engine manufacturers and whether or not they have engines available for repowers?

MR. WHITE: I wish the guy from Cummins had shown up six months ago, frankly, because if we'd had his testimony earlier, that, in fact, the 2.5 is not a CNG only standard, which it was in the Carl Moyer and I didn't think it was here, we might have not had the level of confusion.

I think the work that the staff -- I'm serious, staff -- I mean, because I understand the policy that the Administration wants to pursue does not exclude fuels that have the same or better performance, I understand that.

What we don't want to do is raise fuels technologies up that don't quite meet the same standards, and help them. But I agree with the staff and I thought the guy from Deere made some very good testimony about -- and, frankly, you know, I spend most of my time these days working on the energy problem that we have.

And I want to see a meeting on diesel backup generator retrofit technology and funding, so that we can,
you know, these school buses are going to all be pretty clean if we get going on it. We've got a lot of other places to put these technologies where we're not doing as well. So I think the work, getting all the European work, getting everybody to open their kimono and show what they do and compare them to each other is the way to go forward.

BOARD MEMBER McKINNON: That wasn't the question I asked at all.

(Laughter.)

CHAIRPERSON LLOYD: He operates in the Legislature there.

MR. WHITE: Excuse me, Matt.

BOARD MEMBER McKINNON: I guess I'll leave the question open for the CNG manufacturers, but as to whether or not -- I mean, if we're going to deal with the fairness issue that you raise, I mean, part of the fairness issue is whether or not the CNG manufacturers, engine manufacturers, can also do repowers and are selling their engines for repowers.

MR. WHITE: My guess on repowers is that they're case by case, that certain applications will work and others will not.

BOARD MEMBER McKINNON: Right.
And some will work with natural gas and some will work better with diesel depending on the fuel storage capacity and things like that.

BOARD MEMBER McKINNON: They, too, may make allocation decisions in terms of their markets and where they're moving engines and that's --

MR. WHITE: My sense is to the extent we want to draw people in with public money, we want to draw them where we need them the most, and where they're going to be the cleanest. I don't disagree that we want to encourage all the --

BOARD MEMBER McKINNON: And I guess, finally, while we probably have a very different view about how we should do the year, I do appreciate you and your organization's pressure to keep this thing moving and to make sure that we have the money. And I look forward to, you know, clearly the school buses are going to take a few years and a few more dollars.

MR. WHITE: I think we agree it's important to get the money we have spent well and demonstrate the viability of the program to everybody concerned, improve and narrow our differences and go get more money for the future.

BOARD MEMBER McKINNON: You bet.

CHAIRPERSON LLOYD: Thank you, John And I guess
Warren is going to address the issue of repowering.

MR. SLIDOLSKY: Well, after what you were saying about not quite being responsive to the question, maybe it would be better if I heard exactly what the Board is asking. And to show that I learned, Dr. Lloyd, I'm Warren Slidolsky again from International Truck and Engine Corporation. How can I help?

MOBILE SOURCE CONTROL DIVISION CHIEF CROSS: It's my fault I had Warren out in the hall in an argument.

CHAIRPERSON LLOYD: I think the issue was Warren, Mr. White mentioned that he was delighted to see the progress made by International with the Green Diesel engine, but he said the market obviously for school buses is more limited. We really need your help particularly in the north area to repower some of the engines stationary side so that we can bring the NOx down rapidly in the region.

And it was trucks, sorry, trucks. But the point is that he understood that, in fact, Navistar was not interested in that particular market.

MR. SLIDOLSKY: Well, one thing, when you talk about stationary sources --

CHAIRPERSON LLOYD: I misspoke, it was trucks.

MR. SLIDOLSKY: You know, it's something my mother used to tell me is you can't really make a silk
purse out of a sow's ear. And when you look at these
old --

CHAIRPERSON LLOYD: You would never call one of
your engines a sow's ear, would you?

MR. SLIDOLSKY: Well, no, I would not to answer
the question, specifically. What I would say is not only
International but the industry has worked very hard at
improving engines. And the difference between these older
engines and the new engines is so dramatic that it is
extremely difficult, if not impossible, to bring that
technology backwards, to be a little more specific.
When you look at these old engines, they're
mechanical engines. The beauty of today's engines are the
electronic controls, and you just can't put those
electronic controls on old mechanical engines.

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The new fuel systems are so dramatically
different you just can't bolt on a new fuel system and
have it work so that the repowering thing in our mind is
something that was extremely difficult to do, and can you
really do it? It's almost like trying to design a new
engine. We have been focusing our resources to get the
clean engines of the future that you're demanding, the
public is demanding, and the environmentalists are
demanding. We want to do it.

I'll stop if there's some additional questions on
that?

CHAIRPERSON LLOYD: I understand. I think Mr.

Cackette.

DEPUTY EXECUTIVE OFFICER CACKETTE: It's my
understanding that some of the repowers are much newer
trucks than mechanical ones. They're not trucks of the
eighties, but trucks of the nineties. I think the
specific question is would International make the Green
Diesel engine available for repower into an
electronic-base chassis or something that's more modern?

MR. SLIDOLSKY: Well, one of the things that we
have said initially, and this really starts to get into
retrofit programs, the real key on a Green Diesel is the
particulate filter. Yes, we do some additional things
with a lot of electronics and calibrations to reduce the

NOx. And we have been on record as saying that we at the
get-go would support retrofits to electronic control
engines, because the electronic control engine does play a
role in using a particulate filter.

You can get environmental benefits. And we
support what you're doing with the retrofit programs. But
to really maximize the use of a particulate filter, you
need those electronic controls to keep that continuous
regeneration going. You need a certain amount of heat.

If you're not getting the exhaust temperature required,
then with electronic controls you can get it.

DEPUTY EXECUTIVE OFFICER CACKETTE: I think we're still missing. The question was, wouldn't you like to sell a brand new engine with a particulate filter and put it in an older truck in Sacramento, that's the question, the whole shebang, not just a trap or not just a retrofit of an engine, but the whole brand new thing is what we're calling a repower.

MR. SLIDOLSKY: One of the things that has gotten in the way, and we have looked at that also, Tom. And I'm sorry I keep missing the point. Stick with me or I'll run out of things to say and I'll just have to sit down.

One of the issues you have when you put a new engine into a vehicle is you need to match it with the existing transmission and the existing rear axle. And our engines have changed so much that there's also been dramatic changes in what the rear axle looks like, what the transmission looks like.

So if we were to take one of our new engines and put it into an older vehicle, you may not get that match up and it would lead to a lot of customer dissatisfaction issues. And so that has been -- we've asked that over and over. Also, the size of the engine has changed and there are cases that that horsepower engine just wouldn't fit anymore. So there are three things that get in the way.
Yes, Dr. Burke.

CHAIRPERSON LLOYD: Dr. Burke.

BOARD MEMBER BURKE: They have those same problems when they repower old boats and they change the transmissions and the drive shaft. And you put a longer driveshaft on the prop and you change the universal joint and bingo it works.

MR. SLIDOLSKY: I didn't say it was impossible.

BOARD MEMBER BURKE: I mean Detroit Diesel is putting D decks in boats every day now.

MR. SLIDOLSKY: I didn't mean to imply that it was impossible to do, but when you start talking rear axles, transmissions trying to maybe reconfigure for it to fit, it adds to the cost. It takes away the cost effectiveness. And both in 2004 and what EPA is proposing in 2007, those are major challenges to our industry, and we're accepting that challenge, and we're putting our resources in to meeting those challenges. And that takes away from the ability to do these things that, yes, would give some modest gains. But in the long run, I think we'll be best served with cleaner engines. And, yes, Tom, I still have gotten there.

CHAIRPERSON LLOYD: I think we have two board members that you have stimulated more questions.

Mr. McKinnon and Ms. D'Adamo.
BOARD MEMBER McKINNON: I wasn't aware that there had been major changes in transmissions. So, now I'm a little concerned here. You were out of the room and in fairness I'll kind of wrap the whole thing up as I heard it. What caused you to be asked to come back is there is a great concern that we are budgeting $15 million for what would effectively be a monopoly for you for the next couple of years.

And, you know, frankly, I don't believe that's going to be true. I think there's other companies that are coming along and I think at least one is going to come to the market. But albeit, it is a fair question, if that's what's happening and you're going to benefit from 15 million being invested and possibly you're the only people to supply the engines. The question that was raised is, you know, if you're getting that benefit, is there something you can do to help California?

And one of the suggestions that was laid out there in the testimony was repowering of some trucks in California. And I mean if you're allocating X number of engines so you sell them with the whole bus or you maximize your profit here or whatever, if that's the answer, that's the answer.

But if you have the ability to produce more engines and do repowers where it makes sense, you know, we
have probably several hours more of testimony, maybe the
thing to do is kind of talk about it and check back in and
come on back in a couple of hours after talking it over.
I don't know.
I think it's a fair question. And transmissions
not fitting up bothers me as an answer.
MR. SLIDOLSKY: Well, I listen -- many things
with the electronic control of the engine, the
transmission starts to begin to tune in to what those
electronic signals are, so there are some differences
there.
In fact, we're finding the choice of transmission
as we begin to certify engines in the light-duty
marketplace is very dependent on how the transmission is
configured. So that is becoming a critical parameter in

reducing emissions as just emissions design.
I think the real critical issue that I was
hearing from you is that you don't want to give
International a monopoly. You know, we worked very hard
on this project, and the real motivation for this project
was just to show what diesel is capable of. And we have
jumped the gun.
A .01 particulate standard is something that
wasn't supposed to come into being until 2007. And we
will be offering that next year. Now, the kinds of things
that we have done, to do that is what you heard the
after-treatment folks giving testimony, and they have this
after-treatment device. Other engine manufacturers are
fully capable of going to these same suppliers, getting
these same particulate filters and putting them on and
achieving the same result.

I think the added thing that we have done in
recognition of your concerns, as was pointed out, a four
gram NOx engine, we have worked with what we could to take
it from four to three grams. So those are things that we
have done. We've heard Cummins say that they could even
do more with the NOx. So what is the issue with them
putting on a particulate filter and competing in that same
business?

So those opportunities have been there. We've

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shown the way for years now and other engine manufacturers
have had the opportunity to do exactly the same thing.
And it's my understanding that DDThat is coming out with
exactly something similar for transit buses. So I don't
think it is a monopoly that's been, I think, unfairly
characterized.

CHAIRPERSON LLOYD: Ms. D'Adamo.

BOARD MEMBER D'ADAMO: I view today's proposal as
just one in a series of many building blocks. This issue
first came before us when, I think it was in January of
this year, when we had the transit rule before us. And we've felt that we needed to grapple with school buses, but there was a problem with funding.

Now, we've come up with a way to resolve or at least begin to resolve the funding issue. And in doing so, we've got a whole other set of issues to deal with. I'm totally comfortable with what we have, because I think that it strikes a balance. But the reason I think that it strikes a balance, even though there may be a monopoly for one company, it doesn't really matter to me, because we have the next building block.

And the next building block that's going to come before us is going to be a retrofit program, a regulation on diesel engines. So it's crucial in my mind that whatever we do now supports the next stage. And if we are going to reward your company -- I think your company ought to be rewarded. But if we are going to do that, then I think that we also need to gain in the next step far beyond school buses when we go to the regulations that are going to appear before us within the next year or two.

And so I think you ought to consider what Mr. McKinnon has raised, maybe take a little bit of time and go outside, see what you can do to help us out in the future on some of these other goals, so that you can benefit now, kids can benefit and then the next building
MR. SLIDOLSKY: Well, I certainly hear your message loud and clear. Unfortunately, the folks that have the ultimate decision-making in what you're requesting have probably all gone home, because back in Chicago it's 7:00 p.m. And so coming back in a couple of hours, I'm just simply not going to be able to reach someone. And I think it would want to be a studied response.

CHAIRPERSON LLOYD: We'll be here tomorrow. I think you will be, too.

MR. SLIDOLSKY: Yes, I am, Dr. Lloyd. I will be here tomorrow. And I will make that commitment to try to get ahold of somebody tomorrow morning on that particular issue.

But, you know, we have given something to build with the particulate filters. The kind of work we've done I think for EPA to propose in 2007 that all diesel engines should meet a .01 standard. And because of what we're doing and the pioneering work that we're doing, it's going to allow everyone to have a great deal of confidence that this is a viable way to reduce particulate matter.

So I think that is, I think, is positive that we have done and a reason why we should be rewarded.
question.

BOARD MEMBER HUGH FRIEDMAN: I share my colleague's uneasiness, I guess, is the way to put it, with the fact that in looking at what is available presently now, you have now the best to offer. You've set the standard at some expense and you're to be congratulated for doing it. It's not as far as we want to get, but it's the best that there is. It's very close to the best there is in any technology.

I don't call that a monopoly. To me a monopoly is granting an exclusive right legally without competition. As you've made it clear and others have made clear, competition is free to compete. I don't consider that we are showing favoritism. Our goal is to get the best we can for the public, get the biggest bang for the buck. You happen to have it available.

I don't know the reasons why others don't or chose not to. But there are lots of companies out there and if they see money in it, I'm sure that they'll be throwing some money to get there. And there may be plenty of time. And as others have pointed out, this is the first round.

So while I wish there were more companies who -- there were, if you will, choices whether to deal with Chicago or deal with Detroit, I don't see your company's
name here, other than that you've appeared. You've been identified as the source available.

But I think that's the, I think, a de facto product that you have developed, but you don't have the only patent on it. Or at least whatever patent you have, I assume others can replicate and are talking about even beating you in a few years. And, hopefully, that competition will continue. And I think it's not only because of the efforts of this board and staff before I joined it, but because of the efforts of the environmentalists, those concerned about our environment and others who have been putting the pressure.

And I understand why everybody is trying to get a little bit of grasping about this money. It's a limited pot. And I can sure understand why the Legislature passed

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the buck to us --

(Laughter.)

BOARD MEMBER HUGH FRIEDMAN: -- to allocate it.

But that said, I think we all I think at some level, should be a little bit self congratulatory, and I think particularly those of you who have been testifying here on all sides of this, to feel that you've all played a real role into bringing us to where we are now. And we wouldn't be here if it weren't for everybody in this room probably.
So that said, I share my colleague's uneasiness that there's only International truck currently having a monopoly, but I don't think that that should, in my view, should stop us if we want to preserve a viable replacement bus diesel alternative. And I'm hopeful that there will be choices by the time this money actually has to be contracted.

CHAIRPERSON LLOYD: Thank you. I would like to now, if I could, now take a ten-minute break, and give the reporter till 5:15.

MR. SLIDOLSKY: May I just respond a little quickly on this. I promise, you can watch the clock. I'll be less than a minute. You know, we are looking at other applications for Green Diesel. And we're talking about a difference between three grams and 2.5 grams.

My company has signed on to the challenge to get to .2 grams. And so there are better things coming and we're working at that. It doesn't stop at Green Diesel. And thank you for your indulgence.

CHAIRPERSON LLOYD: Thank you. It was our questions. I do have a request here for one more witness, Bonnie Homes-Gen. I know she's got a child to take care of, so I'm going to take this one last witness, then we'll take a ten-minute break.

MS. HOLMES-GEN: Thank you. I said good
afternoon here in my testimony. I guess it's good evening. My name is Bonnie Holmes-Gen. I'm Assistant Vice President for Government Relations with the American Lung Association of California. And I, first of all, want to join the chorus of those who are very appreciative of the $50 million for this program and certainly want to work together with you and the Governor to increase that amount in the future, so that we can make a much bigger impact on children's health. We absolutely have to get more money to buy more buses and have more impact. But today we're here to testify on the proposed distribution of funding for school buses. And what we're asking for you to do today is to increase the funding available for the cleanest school bus technology, alternative fuel, compressed natural gas technology and to dramatically reduce or eliminate the funding allocated to low-emission diesel technology. The American Lung Association of California is involved in this issue, because we are concerned about air pollution and children's health. Each diesel school bus idling next to a school bus -- next to a bus stop or a school yard is having a direct impact on the lungs and breathing ability of children. And we know from recent research that impacts to
the lung from air pollution, may not only cause acute
symptoms, but contribute to chronic diseases and reduction
of lung capacity over the lifetime of the individual. I'm
not going to read my entire text on health effects of
diesel. I understand that you know very much about the
health impacts and appreciate all the work that you have
done to list diesel as a toxic air contaminant.
But I do want to say that we have major concerns
about the health effects of diesel exhaust, that we're not
prepared to call any diesel technology, at this point,
clean or green. Although we acknowledge there certainly
have been improvements and progress in producing lower
emission diesel technology.
And we believe that using the terms clean or
green can be very misleading, because we do have so much
information about the toxicity of diesel exhaust. And no
testing has yet shown that lower-emission diesel
adequately reduces the toxic risks. What I would like to
do is just set out a few principles for the Board to
consider while you are making your decision today, this
evening.

One, that your decision for new purchase of
school buses with public funds should be made according to
determining which buses are superior from a public health
perspective. And we view that as looking at a per bus
comparison of emissions and benefits that are available.

And I wanted to say briefly on the issue that we have to consider in-use emissions, that we cannot put the in-use emissions issue to rest until we have adequate bus-to-bus testing between CNG and Thater diesel technologies.

The limited testing that's been done in San Diego on two buses is not sufficient. And I wanted to point out that the staff report certainly does not put this issue to rest. It acknowledges that there is an in-use discrepancy and that that's a problem with transit buses, and that it's unknown, the degree of the problem for school buses.

The staff report says on page 22, "At this time, there is insufficient information to determine if there is a significant in-use PM discrepancy with school buses, as there is with transit buses."

So, you know, we can't put it to rest as the representative from International calmly suggested that we could do. We definitely need to have more information.

So, first, look at a bus-per-bus comparison getting the most emissions benefits on a bus-per-bus comparison, especially because this decision does involve the expenditure of limited public funds. Please consider which buses will be the cleanest over the long-term.

These buses will be on the road for 15, 20 years
or longer, and we believe the alternative fuel technologies do have the best long-term emissions benefits because they do not have similar deterioration problems to diesel buses. We don't believe the Board should establish any special standards to allow the low-emission diesel buses to receive funding in this program. You know, you've heard a lot of testimony about the International bus and how it cannot meet the 2.5 gram standard. And, you know, we are very concerned about weakening that standard to 3.0 grams for one company.

And finally, we believe the Board should follow its adopted resolution and replace diesel fuel school buses to the degree that you can with cleaner alternative fuel buses. I did want to read two sentences from the American Cancer Society, if I can change hats. I have submitted a letter from the American Cancer Society, and they are saying, "We urge you to restrict the purchase of new buses to those that utilize technologies that meet or exceed natural gas school buses and establish a program that assures buses remain clean over the lifetime of their use. Looking to the future, we ask that you take action that will result in fewer cancer cases in California."

Thank you for the indulgence of your time.

CHAIRPERSON LLOYD: Thank you. Any questions or comments?
Thank you.
With that, we will take a ten-minute break till 5:20 to allow the court reporter here to take a rest.
(Thereupon a brief recess was taken.)
CHAIRPERSON LLOYD: Can we restart? We have Sandra Spelliscy, Gail Ruderman Feuer, Julia Levin, Jesus Santos-Guzman.
Just wait a minute. We're not timing yet.
Sandy, we have now moved the light now and it is actually working.
MS. SPELLISCY: Okay, lucky me.
BOARD MEMBER HUGH FRIEDMAN: Your time is up.
CHAIRPERSON LLOYD: The other thing, remember, I have this, you can't speak.
MS. SPELLISCY: Good evening, Mr. Chairman and Members. My name is Sandra Spelliscy, and I'm the General Counsel with the Planning and Conservation League. And thank you for the opportunity to address you on this. And I want to make it very clear that our goal today is to help craft a program that we can all support and we can move toward to create it as a long-term program and continue to seek additional funds, because we really believe that this is a program that we need to maintain. And we want to be able to support it over the long term. I'm going to spend my time just commenting on
some of the remarks that have already been made today.

And I'd like to start recognizing that several Board
members have picked up on what we think is the anomaly of
the staff recommendation in terms of the money for new
diesel purchases. And that is that we could find ourself
in a situation where several months after the time that
the last Green Diesel bus, the 3.0 gram bus, is delivered
to a school district, that bus which will be on the road
for probably 15 or 20 years will actually be dirtier than
the new diesel engines that will be coming on the market
by five other major manufacturers in California.

So we think that that's one of the problems with
carving out this 3.0 exception. And we do have a problem
with backsliding on the low optional NOx standard. As you
know, that standard was devised in part in order to have a
standard that we could use to spend air quality incentive
funding. And that's exactly the case that we're dealing
with here today. We have incentive funding. We've never
spent it on a situation where we go above that low
optional NOx, and we don't think that should be happening
today.

On the other hand, we, too, want to get buses on
the road as soon as possible. So we don't think that we
should be delaying purchase of buses, but we think that we
should use the money now to purchase the cleanest buses on
the market now, and then, you know, go forward, and if other technologies come forward that can meet tough standards, then hopefully we will have money, at that point, to, you know, spread around.

We don't want to strand school districts that may not be able, for whatever reason, to use alt fuels, although we believe alt fuels are the superior technology here. But we are willing to see some money spent as an exception to, you know, a general push for alt fuels in terms of new purchases, but we would like to keep that very small. And we've mentioned the number of $5 million. And that money could be coupled with the money in the small district program that the Department of Education has already. And so that would give a fair amount of money to smaller districts that, for whatever reason, can't use CNG.

I want to get back to the issue of in-use emissions, because I think that issue got muddied a little bit here this morning. And I also want to go back and hit on what we know that's in the staff report, and what they've said is that there's insufficient information at this time to determine if there's a significant in-use PM discrepancy with school buses as we know there is with transit buses and other heavy-duty diesel engines.

And I would just submit to you that insufficient
information is not an adequate basis for making a $15
million policy decision. We're just not there in terms of
the information. We're projecting in the staff report
long-term PM reductions based on certification numbers.
And I just don't believe that that's the correct approach,
because we know that certification numbers don't reflect
reality.

So we take exception with what the staff report
says in terms of what the overall PM reduction would be if
you allocate $15 million for diesel.

I also want to just briefly say that there's a
few. And I know I'm getting close to the end, there's a
few things that haven't been discussed here today that I
just want to highlight, because I think this Board should
be considering these issues in every policy decision that

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it makes. And those are the issues of fuel diversity,
energy security and basically continuing to move our fleet
towards zero and near zero emissions. And we know that
promoting alternative fuels gives us a leg up on all three
of those issues. And that's another important reason why
we're promoting that the majority of the money should go
to alternative fuel buses for new purchases.

CHAIRPERSON LLOYD: Thank you, Sandy.

Gail Ruderman Feuer, Julia Levin, and Jesus

Santos-Guzman, Marta Arguello.
MS. FEUER: Good evening, Dr. Lloyd, members of the Board. I am Gail Ruderman Feuer. I'm a senior attorney for the Natural Resources Defense Council. I'm here on behalf of NRDC and our 80,000 That members. We appreciate all the work your staff and this board has done, all the time they have spent developing the proposal. Unfortunately, as you know, we and many in the environmental and public health communities disagree with the proposal to allocate money to new diesel buses as opposed to spending money, both on alternative fuel buses and on retrofitting of existing diesel buses.

We don't question that the International bus is much cleaner than the smoking diesel buses on the road today. And we commend them for that. That's a good thing. But it's not certified. And when it will be, it will not be as clean as alternative fuel buses. And we think we should not be spending taxpayer money to subsidize a bus which is not as clean, particularly when it comes to our kids.

This Board in 1998 adopted a resolution to set a goal to quote "replace diesel fueled school and public transit buses with cleaner alternative fuel buses," close quote.

We urge you not to change course with that resolution. This year your Board adopted its transit bus
rule. And earlier Board Member D'Adamo said that this should be a building block as part of that transit bus rule. And we absolutely agree. And we've heard the diesel industry come up and say well, the proposal by staff is consistent with the transit bus rule.

I'd like to focus on that issue, because we think the transit bus rule is precisely you should not go with the staff proposal, because they are inconsistent for four very serious reasons.

The first, the transit bus rule does create two paths. We, in the environmental community, accepted that. And as you may know, we originally were alt fuels only and we changed our position and said no, if diesel cleans up its act, we can support it. The two-path concept was okay with us.

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But that rule, in its staff report this Board said, was designed to create incentives for transit agencies to use the alternative fuel path. And in particular, from 2004 to 2007 if you look at the standards for diesel and for alternative fuel, they are not the same.

Diesel has to meet a .5 gram NOx standard. Alternative fuels only have to meet 1.8 grams on NOx. On particulates, diesel has to meet .01, natural gas has to meet .03. That's because this Board decided it was very
important to incentivize alternative fuels. That's not what you're doing here. You're putting them on an even playing field.

Second, if transit agencies choose the diesel path, there's a built-in environmental benefit that was sold to us. And that is zero emission buses. In 2003, larger transit agencies have to buy 3.0 emission buses. In 2008, they have to buy 15 percent of their fleet with zero emission buses.

If you choose alternative fuels, you have no obligations to buy zero emission buses until 2010. Again, there was a built-in environmental benefit, again, to encourage transit agencies to go the alternative fuel path.

Third, the transit bus rule was just that, a rule, a regulation designed to set standards. What you're doing today is deciding how to spend taxpayer money. And I submit a more stringent standard should apply where you're spending taxpayer money which should be used to incentivize the cleanest technology.

And fourth is this is about kids. And, again, we believe the most stringent standard should apply when you're dealing with children's health.

Our concern is --

CHAIRPERSON LLOYD: It's been red for awhile.
MS. FEUER: It's been red. I'm sorry. Let me just wrap up. Our concern is if you adopt the staff's proposal you will create an incentive for school districts to buy more diesel buses instead of alt fuels for two reasons. I'll be very quick.

One is they have to spend $25,000 of their money either way. They can spend $25,000 for diesels, $25,000 for alternative fuels. If they go the alternative fuel route, they have to deal with the infrastructure of a new fuel. Why would they pick alt fuels? You're almost encouraging them to go the diesel path.

Second, let's say they choose the clean path. If school districts start choosing the clean alternative path, they're going to use up the money and the next ones in line are going to have to go diesel. Again, you're going to push them to the diesel path.

We urge you either to go back to the staff proposal in September which was a 2.5 gram low NOx optional standard. We think that's fuel neutral. In fact, we believe if you set that standard, they will come. The diesel manufacturers will find a way to get their engines to meet the 2.5 standard, or we support keeping a 50/50 split, alternative fuels, diesel, but put the diesel money into retrofits. You're going to get more PM reductions. It's a better deal and you won't be favoring
one manufacturing with a weaker standard.

CHAIRPERSON LLOYD: Thank you, Gail. I think the issue that certainly I grappled with is the way in which people flip-flop back from NOx to particulates and confusing those. And the critical area here for children is for toxic air contaminants, the particulates there. And you can't just flip the NOx switch on and off. It's a definite issue. And so I think that's what you see when the staff talked about it. What you get was basically bang for your buck on some of those. So that's what I struggled with personally, because we can't just do that.

MS. FEUER: And we agree. We basically want both. We want to see each bus to be cleaner. We think in-use natural gas is cleaner on both.

CHAIRPERSON LLOYD: But, again, I hear these things, but I'd like to see some data which proves that. We don't have the data for either of those and we have to make some policy decisions here.

Any questions from the Board?

Supervisor Roberts.

BOARD MEMBER ROBERTS: This idea of the two categories, 25 million in each, and I think what you're suggesting is that you'd have alternative fuels for half, the other would be diesel. But within that diesel you'd have the option of retrofitting or buying.
MS. FEUER: Well, our proposal is that the $25 million pot would be specifically for retrofits. One thing we have proposed in thinking about that is we recognize there's a concern about rural school districts who may not be able to build the infrastructure. Our proposal would be to set $25 million for retrofits, but to direct your staff to develop an exemption, if there are rural school districts, school districts which cannot -- did I mean CNG.

Okay, $25 That for CNG, 25 That for retrofits in the diesel pot, so you're splitting 25 in each. And our point was in the diesel retrofit kitty that perhaps a small portion of this money could be available for new diesel buses, but only if it were a rural school district, a school district which met a specific guideline for why it could not buy new alternative fuel school buses. And you'd have a cap on how much would be spent on that.

But we oppose the use of any of that 25 for a school district which can meet the 2.5 standard and buy a cleaner bus.

BOARD MEMBER ROBERTS: I'm wondering if it would work significantly different if you just left it up to the school district? Are you afraid they would end up buying -- using a majority of that money for the diesel buses rather than doing retrofit?
MS. FEUER: Our concern is that school districts not be allowed to choose a dirtier technology because it's cheaper for them, because you're not creating the incentive. We think that this board should push them to the cleaner technology, unless there's a reason they can't go there.

BOARD MEMBER ROBERTS: Some overriding circumstance that they couldn't?

MS. FEUER: That's right. And the same way with a lot of transit agencies. And supervisor, you're on a transit agency that has chosen a clean fuel path. We have been incentivizing transit agencies to go the alternative fuel path. We want you to incentivize school districts the same way to go the clean fuel path.

BOARD MEMBER ROBERTS: I just happen to be on one that did choose the CNG, but That seems to me here -- what's bothering me here is the sort of limitation on the retrofit part of this, where we have a smaller part for retrofit and we've got an even larger amount set aside for basically a technology and a company here. And I was trying to think if there might be a way to do your 50/50 split, but we'll get to that. I'm not going to let go of this.

MS. FEUER: We'd urge you to pursue that, because we really think we should not be giving away $15 million
to one company.

BOARD MEMBER ROBERTS: Well, what is so clear, if we're talking about immediate environmental benefits, the retrofit, which is the smallest part of this whole amount, is the thing that would benefit us the most.

MS. FEUER: And we agree.

BOARD MEMBER ROBERTS: We've got this upside down right now, but that's okay.

CHAIRPERSON LLOYD: One thing I must say, I'm very impressed that after one meeting of the International Retrofit Committee that Mike is chairing, that now we have you endorsing diesel retrofits. We've come a long way, so I appreciate that.

MS. FEUER: Yes. We actually have. You know, in all fairness, your staff has spent a lot of time with us.

We have listened and we are more supportive --

CHAIRPERSON LLOYD: I was sincere.

MS. FEUER: -- of retrofits. We still would like to see more testing.

(Laughter.)

BOARD MEMBER DeSAULNIER: It's hard to tell.

(Laughter.)

CHAIRPERSON LLOYD: The facts are there.

BOARD MEMBER McKINNON: They endorsed our transit rule, too.
CHAIRPERSON LLOYD: Yes, Supervisor DeSaulnier.

BOARD MEMBER DeSAULNIER: I'd just be anxious to hear Mr. Kenny respond to this, because it doesn't seem like a bad idea and I'm sure you thought about it, didn't you?

EXECUTIVE DIRECTOR KENNY: Actually, yes, we have. We've thought about probably every permutation you can think about, and probably every permutation is being presented to you today.

CHAIRPERSON LLOYD: Could I exercise the Chairman's prerogative here? I think it would only be fair to -- we have not heard from the school districts at this stage, and we've got a bunch of those to testify. What I would like to do then is ask Mr. Kenny to come back after they've testified, Supervisor, if that's okay with you.

BOARD MEMBER DeSAULNIER: Certainly, Mr. Chairman.

(Laughter.)

BOARD MEMBER DeSAULNIER: When you put it that way.

(Laughter.)

CHAIRPERSON LLOYD: Thank you very much.

Julia Levin.

MS. LEVIN: Good evening. My name is Julia
Levin. I'm the California Policy Coordinator for the Union of Concerned Scientists. We're a national nonprofit organization with nearly 15,000 members in California. On behalf of those members, I would urge you to use the clean school bus money for the cleanest possible school buses, which we firmly believe are natural gas buses. And if you must use a small part of the money for diesel in rural school districts, that it be truly an exception to the rule and not merely a third of public money which is supposed to incentivize cleaner alternative fuel buses.

There are a whole host of reasons why we think this is so critical in the decision that you make tonight, but I'm going to focus on two right now.

Now, despite the testimony of diesel engine manufacturers, and International in particular, real world, in-use emissions from diesel buses are significantly higher and more dangerous for our children than real world, in-use emissions for natural gas buses. And I'll be going into that in just a moment.

But the second reason, which is also equally important, is that natural gas will lead the way to fuel cells, which this board has recognized is the end goal for both transit and school buses. Those will be the cleanest buses on the road and we hope to see them soon.
On the first point, although we do applaud the diesel makers for building much clean engines and they have come a long way, they've got a long way yet to go to catch up to natural gas. There was testimony earlier about an ARCO/BP test conducted in San Diego. That test used exactly two buses. No statistician would find that test definitive on the topic of emissions from Green Diesel, so-called, Green Diesel buses.

The test in San Diego did not use the most demanding urban drive cycle. It did not include cold starts. It used two very new buses with very new traps. It is not a safe assumption to make that emissions would be the same in the real world in urban and much more difficult driving conditions.

We strongly urge the Board to commission or to conduct a side-by-side comparison of CNG with That cleaner diesel. But we do not feel that based on the current evidence that this Board can reach the conclusion that diesel emissions would be the same or lower.

And, in fact, I would like to read to you from the staff report on page 22, that the staff recognizes that data indicate that real life PM emissions from diesel transit buses are greater than expected by the certification values, while CNG engines produce significantly in-use PM emissions.
The staff goes on to say that in the transit bus field, they would not be surprised if diesel transit buses have ten times greater PM emissions than in certification, ten times. This is very significant. You heard testimony earlier today, I think it was from International, but I'm not positive that the emissions in-use in real world emissions would be substantially similar or the same as certification.

Your own staff has said that they could be as much as ten times higher for diesel transit buses. We're talking about the same engines.

There has been a side-by-side comparison done of trucks, and using the emissions data from trucks, if we reduce the particulate matter by 85 percent, which is what the new traps will have to do, the particulate matter emissions from diesel school buses would still be double the particulate matter emissions from CNG buses. That is based on the cleanest newest engines going into trucks in a side-by-side comparison. You're talking about double the emissions and affecting our children.

In the area of smog-forming pollutants, which are NOx and hydrocarbons, the difference is a little smaller, but it's still significant. There are -- using the EPA calculation method for NOx, the difference would be 25 percent. Green Diesel, so-called Green Diesel, would
still emit 25 percent more NOx and hydrocarbons than CNG buses. This is significant both because it leads to smog, but also because NOx itself directly impacts children's lungs, according to a recent study by the University of Southern California School of Medicine.

CHAIRPERSON LLOYD: Again, I don't think you have to tell this Board what we know. We funded that study and we've had reports on that.

MS. LEVIN: I'd like to leave you with one final point. And that is natural gas leads to fuel cell buses, which you all know is where we want to end up, at least in the foreseeable future. Not only does it use a similar fuel, but it uses much of the same infrastructure, particularly the maintenance facilities, which are the most expensive part of a CNG infrastructure. Those costs would be directly offset as we move towards fuel cells.

In addition, the pipeline, the compressor, the pumps are all very similar or the same. So I'd like to close by urging you to choose the cleanest possible school buses. There is no question right now that those are natural gas.

Thank you very much.

CHAIRPERSON LLOYD: Thank you.

Any questions?

Thank you.
I presume staff would like to respond to this continued mention of in-use, and I presume we've got some of the finest staff in the world that can answer these questions.

DEPUTY EXECUTIVE OFFICER CACKETTE: Yes, we do.

The quote came out of the Transit Bus Regulation that the Board considered early last spring, or the winter time, I guess it was. And with a nontrap equipped bus, there was comparisons that showed that when the diesel bus went on a very aggressive cycle, like you'd have with a transit bus where it's going start, stop, start, stop, that it did produce a lot more particulate compared to its emission standard, which is done on a much more easy test, and that the natural gas bus did not exhibit that characteristic. And that's where this idea, that in-use emissions could be much higher in real use in a transit bus, came from.

First of all, these school buses don't operate like a transit bus. The school bus cycle is much more like the normal driving cycle we put heavy-duty trucks through. And second of all, we've gone and tested one of the trap-equipped Green Diesel buses on the various types of cycles. And we've tested on the transit bus cycle. And we've tested on what they call the school bus cycle, which is more equivalent to the certification type cycle we use.
And, basically, its emissions are essentially the same at around .02, .03 grams per mile, which is the kind of level we measured on a CNG transit bus, for example. So I think what happens, the technical reason for it, is that the trap is to capture the extra particulate that comes out and then eventually regenerate it. So it acts as somewhat of an absolute filter, not completely, but it's able to pick up the extra emissions that come from the more aggressive driving, but maybe from a more fundamental standpoint the transit buses don't tend to have as -- or I should say the school buses don't have these aggressive driving cycles as the transit buses do.

CHAIRPERSON LLOYD: Thank you.

MS. LEVIN: Can I make two quick responses on that?

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CHAIRPERSON LLOYD: One. I think, again, in this particular case, we've got experts here and I understand what you're saying, but I think we have to move ahead.

MS. LEVIN: Okay. I would just say that your point is well taken, but even with the 85 percent reduction for traps.

CHAIRPERSON LLOYD: I thought -- thank you.

Jesus Santos-Guzman, Marta Arguello, Tiffany Schauer.

MS. ARGUELLO: He agreed to switch with me,
because I have to catch a flight.

CHAIRPERSON LLOYD: You are?

MS. ARGUELLO: Marta Arguello.

CHAIRPERSON LLOYD: Oh, okay.

MS. ARGUELLO: I am Marta Arguello. I'm the Environmental Health Coordinator for Physicians for Social Responsibility. I am a health educator by training. Our organization represents over 2,000 physicians in the State of California who, much like yourselves, are charged beyond their clinical practices with foreseeing and forestalling damage to the environment and to human health.

And as such, we're here to encourage you to go with the cleanest burning fuel alternatives, which is compressed natural gas.

And I want to put, sort of, that hat aside for awhile. And this is my first experience here. Like I said, I'm a health educator by training, and I spent many years working for the National Cancer Institute, a volunteer for the American Cancer Society. I've worked many years with asthmatics and their families. I've worked with the American Lung Association.

So I'm a little bit troubled after sitting for four hours, this is my first hearing of this type, of sort of the costs, discussion of costs and benefits of diesel
and back and forth, and nowhere have we really talked about the health impacts. And I know that you're well aware of them, but I think it's important for us to take a moment and remember that we're really talking about the most vulnerable populations, and that's children, the elderly. And more importantly some of the trends that we're seeing with asthma are truly alarming when you think of inter-city communities. Black and Latino Communities are severely affected. If you're an African-American child between the ages of 15 to 24, you're five times more likely to die of asthma. These are the decisions that are important than whether International has $15 million to spend on diesel. That is your charge, as physicians are charged to provide the best medicine possible. The best medicine possible for California's air is compressed natural gas.

Thank you.

CHAIRPERSON LLOYD: Thank you.

MR. SANTOS-GUZMAN: My name is Jesus Santos-Guzman, pediatrician from the Coalition for Clean Air. And I thank the chairman and Board members and other representatives for the opportunity to talk in this meeting.

I came here to ask this Board and the appropriate
agency to support the cleaner alternative technologies and retrofits from the harmful effects of the diesel emissions. Diesel emissions have been shown to contribute importantly to several health effects, like cardio-respiratory, morbidity and mortality. It also has shown to reduce the function and ability of the lungs to respond on a daily basis. And also a higher prevalence of several symptoms like bronchitis, coughing and several others.

It also affects the development of kids. That not only affects the lungs but may also affect the entire economy, the entire kid and arrest possibilities for future development, academic development. The air pollution that received air particles and other emissions from diesel may contribute to more asthma in our kids and asthma may make also our kids live to have more absenteeism, also to require more special programs and to require more medical assistance, so in some ways increase other costs as well.

This also has been proved to increase the risk of cancer and some of the things that we can do to reduce all these morbidity and cancer risks is to choose for kids the best available technology, the most available one, the one that has proved to reduce morbidity and cancer risks. And so the point to be underlined is to use whatever is
available and is proven to reduce all these risks.

So that's my statement.

CHAIRPERSON LLOYD: Thank you very much indeed.

Next, we have Tiffany Schauer, Stephen Rhoads, Sal Villasenor.

MS. SCHAUER: Okay, my speech is now substantially reduced.

CHAIRPERSON LLOYD: Thank you.

MS. SCHAUER: I just wanted to say a quick word to you. My name is Tiffany Schauer and you may or may not be aware. I recently stepped down from being vice chair of the Air Quality Management District Hearing Board. And at that time, I would attend the National Judicial College where they'd train judges to adjudicate cases. And judges from all over the country come there to be trained. And one night I was out with a judge from Alabama, and she looked at me, and I was saying how hard it was and I wanted to be fair and wise. And she said, "Judge Schauer, there's one thing you ought to know. Any Judge ain't got no friends." And you must feel like that today.

(Laughter.)

MS. SCHAUER: But you do.

CHAIRPERSON LLOYD: Could you say that again, that was good.
MS. SCHAUER: I don't think I can, but it stayed with me, and I think it should stay with you, that you do have friends here and we're here to help you, and that's our job. And I know that your job is very difficult too. And I have been in those chairs, and it's tough. And I appreciate that you're willing to take and make the sacrifice to do it.

Okay. With that said, my new hat I wear is Executive Director of Our Children's Earth Foundation. Now that organization is new. I'm not new. I worked at EPA as an Air Enforcement attorney for five years. After that, I represented industry at Brobeck, Phleger and Harrison on air issues. Then I sat on the Air District Hearing Board for three years.

So I would like to think I'm relatively experienced. Although no one in air ever is. As the staff I'm sure well knows, that this is complex, it's tedious, it's probably more boring than election law. And I want to thank you for doing your work too. And I know how difficult it is to understand air and make good choices and good policy.

I have a simple message and I think the power of my message is, the mission of my group is to create a cohesive voice among environmental organizations that
right now are disenfranchised and don't have a voice. I'm here today to say I represent that voice. The voice and the sentiment of the environmental community is enormous and it's strong and it's heartfelt about this issue.

I have a sign-on letter that we put together in less than three weeks when we were made aware of the decision that was going to be made. It's representative of over 40 organizations. It compiles about -- we have very conservative estimates, it compiles about 400,000 to 500,000 individuals. You have the support to make a decision based on our discussions with the environmental community. The simple message is you are fully supported to make a decision to protect our kids' health by allocating the money for the purpose of clean school buses that can certify today to the 2.5 NOx standard and the lowest certified and in-use PM emissions. Case closed.

If it can be certified, and side-by-side certified and in-use is lowest, we win. Right now you don't have all the information you need to make that decision, but you have to make a decision today. There's a decision you can make next year. There's a decision you can make after that. You've got time to help other fuel producers and other manufacturers, but today you need to make a decision with what you have in your hand and you have that information.
We know that CNG can meet those standards. We have today that propane can also meet it. There may be other alternatives after additional research is made. It looks like, in my estimation, that the evidence is inconclusive today for the advanced Green Diesel, clean diesel, interim diesel. That's fair enough to be said, and it is fair enough to recognize their efforts and it's fair enough to reward them in other ways and other programs, but just not today in this decision.

Thank you.

CHAIRPERSON LLOYD: Thank you very much.

MS. SCHAUER: Any questions?

CHAIRPERSON LLOYD: Stephen Rhoads, Sal Villasenor and Dave Randall.

MS. SCHAUER: I'm sorry. Can I just make one five-second statement. In addition to the sign-on letter, we also have included in the packets over 500 E-mails of individuals in support of our statement.

Thanks.

CHAIRPERSON LLOYD: Thank you.

Now, we hear from the school districts to see what you really want.

MR. RHoads: I'm the first one of the schools, and I'm Stephen Rhoads. And first of all, I want to say also that we are your friends, and we appreciate the
efforts that you are going through today in the deliberations.

I am here representing the School Transportation Coalition. This Coalition was founded by a John Mather, Secretary of Education for the Governor. And when he put it together, he wisely, as he usually does, put it together to represent a broad spectrum of education people from employee organizations, like CTA and the CSEA, administrators, transportation officials and 50 school districts. We represent over one-quarter of the school enrollments in California and 28 counties.

We are troubled a little bit today by all this controversy, because this really should be a day of celebration. You are going to be cleaning up the air today and we are very, very thankful for that. You're going to be putting school buses on the road that are cleaner, some of your staff say ten times cleaner, than the buses they're going to be replacing. They're safer, much more safer, and they are also fuel efficient. And it is something that all of you are going to be able and all of us are going to be able to take great pride in.

The Governor proposed this 50 million in last January's budget. That was the bare-bones budget. And it was the single largest appropriation that was ever made for school buses in California's history. And he did it
for the health of the children and the concern of the children.

We are not proud of the fact that we have so many old school buses, and we are not proud of the fact that we are ranked dead last in this country for the number of kids that we bus. It's only 16 percent of our children. The average for the rest of the nation is 54 percent.

Our major concern has to do with the school match. As some of you probably know, I used to be the Executive Director of the California Energy Commission. But in my older days when my hair was very, very black and brown, I was actually a school finance expert. I was hired by A. Alan Post for that purpose in the Legislative Analyst's Office, and I was the chief witness for the Western Center of Law and Poverty on the Serrano issue.

I might add I did that all pro bono. I was young in those days and kind of idealistic.

But one thing, I know a tad about school finance, and I do not know of a single school district that has allocated, set aside, any money for this match. And one of the reasons is because when the Governor proposed this program, he did not propose a match. He not only did not propose a match, but the language that accompanied the budget BCP was very, That clear. There will not be a school match.
And he gave a series of reasons for that. And the reasons were because the school districts, unlike other organizations, like transit districts, just have a very, very difficult time coming up with the money.

CHAIRPERSON LLOYD: Steve.

MR. RHOADS: The Legislature did not propose -- did not even discuss a match in the legislation deliberations. And as the Legislative Analyst's office was quoted earlier today, Chris Brown said that there would be no school match.

CHAIRPERSON LLOYD: Steve, three minutes has gone.

MR. RHOADS: I'm going to make this quick. I'll skip a couple of issues. There's even some that say you probably have the -- you need regulations to do this.

Today we'd get 3.17 percent for an increase in transportation funding. And it's hardly enough to cover just what the bare bones of the gasoline increase is going to be.

We have three proposals related to the match. One is we'd liked to see it eliminated. If you can't eliminate it, we'd like to see you maybe have it reduced to $5,000 or $10,000 per bus.

Third, this is my Serrano hat that I'll put on, because people ask me well, can we think about the ability...
to pay? Because we certainly don't want to come up with a proposal where only the wealthy districts are able to take advantage of this program.

And so I have a proposal for you to consider and that is we have a form in school transportation called the J141 form. And in that form we put in what the State approved transportation calls for and we put in what the State approved reimbursements are. And my proposal is this, that maybe you say hey, if a school district only has State reimbursements of 75 percent or less, then you exempt them from the match. That will be a lot of districts, but that's because the encroachment is so bad among school districts.

I had an issue on the traps. And my issue was -- and I just want to take one minute on it because of Professor Friedman's question that he asked earlier. Originally, the staff's report said that the school districts would not be awarded these traps until the year 2002 and 2003. The new version says December 15th, 2001. We are very supportive of traps and we want to do everything to help the ARB with traps. It's just that you don't need the money right now and we'd rather see that money spent on school buses, and then we will work hard with you during the school year. In fact, we can almost guarantee you get 10 or 20 million during this next budget
cycle and it won't delay your trap program at all.

Thank you very much.

CHAIRPERSON LLOYD: Thank you very much.

MR. RHOADS: I'm going to take one more thing, just if I can. We want to thank the staff, if I can, just for one second. School district people and transportation have a tendency to be a little skeptical of coming to Sacramento. And I have been told this many, many times by many of the members. They are really appreciative of the staff. You listened. You made lots of changes and they want to thank you for that.

Thank you.

CHAIRPERSON LLOYD: Thank you, Steve.

We've got Sal Villasenor, Dave Randall, Doug Snyder.

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MR. McFADDEN: Mr. Chairman, thank you. I am not Sal Villasenor.

CHAIRPERSON LLOYD: I didn't think you were.

MR. McFADDEN: He has had to leave. However, Sal has asked that I could testify on his behalf. I am Brett McFadden on behalf of the Association of California School Administrators. Sal Villasenor who's, I believe, speaker number 35, I'm speaker 39, also represents the School Board Association, so the two of us represent pretty much the lion's share, the bulk of the school management
11 officials in the school setting.
12 And I basically want to do four things very
13 briefly tonight. One I, too, want to thank all of you.
14 We are in agreement with Mr. Roads that this is very much,
15 you know, a celebration for us. These are funds that we
16 did not have last year.
17 And, in fact, the allocation of these funds is a
18 problem we didn't have last year. So this is something
19 that we're willing to deal with.
20 A second, I would like to sort of bring the
21 Board's perspective on a larger picture. The bulk of the
22 testimony that you've heard this afternoon and this
23 evening has been centered around CNG versus diesel, sort
24 of the environmental aspects of it. But what I'd also
25 like to bring to your attention is sort of the education

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1 side of this and what's occurring in that realm.
2 In the last five years, we have seen one of -- I
3 think, one of the largest school reforms or policy reform
4 efforts in any single area or political issue that we have
5 faced in the State. Nevertheless, most of the dollars
6 that have been dedicated to that have been
7 nondiscretionary dollars. They have gone to programs
8 specific. As a result, our school budgets, the
9 discretionary share of those -- now, while we saw an
10 increase last year, overall the discretionary share of our
dollars has shrunk, so that the money that we get out for
transportation has to come out of somewhere. And in this
case, it comes out of our classroom dollars.

So in the last five years, we've had to deal with
class size reduction, new teacher standards, new
accountability standards for students. Now, today, for
instance, I was at a hearing this morning talking about
that one in seven of our teachers does not have the
sufficient credential or sufficient training. Later on, I
was at a low performing schools seminar. And now this
afternoon we're talking about school buses.

So we are -- the pressures that we are facing are
rather drastic, and I would ask that the Board keep that
in mind. What the staff has put together for you is a
good start. It represents sort of a multi-faceted

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approach to this issue.

CHAIRPERSON LLOYD: How will you change it?

MR. McFADDEN: The only change -- I would concur
with Mr. Rhoads, and we are in support of an amendment.
The match is a problem for us. And that is very
prohibitive for many of our districts to participate in
that, primarily because of the factor that our
discretionary dollars are limited, and that's basically
the bulk of my testimony.

Thank you.
CHAIRPERSON LLOYD: Thank you very much.

Professor Friedman.

BOARD MEMBER HUGH FRIEDMAN: Before you leave, since you're apparently representing the administrators and the school boards --

MR. McFADDEN: Yeah, the management group is what it's called.

BOARD MEMBER HUGH FRIEDMAN: -- at least speaking for them, do you have any interest or concern as to whether school districts have any choice in the new bus replacements, that is any choice, any alternative to natural gas?

MR. McFADDEN: Well, I think our position would be that it would be flexible for each district.

BOARD MEMBER HUGH FRIEDMAN: If you could buy three buses, new buses, or your districts could buy three new buses that were diesel and that reduced the particulates to .01 or something close to that, but still kicked out a little more NOx, versus two buses that are natural gas, would you like that choice?

MR. McFADDEN: Yes, I think overall --

BOARD MEMBER HUGH FRIEDMAN: You mean districts want to spend within the allocations. It wouldn't be us making the expenditures, but would you want that choice?

MR. McFADDEN: To the extent that we could
maximize the number of buses at a lower cost, yes, we would like that choice. And that's --

BOARD MEMBER HUGH FRIEDMAN: With that margin of potential difference.

MR. McFADDEN: I think that would overall be good. Now, I can't speak for every Board or every administrator, but to the extent that the program is flexible enough to fit with the needs of an individual district, what's good for an urban district is not necessarily sufficient for a rural district.

And you'll hear from a colleague of mine later on, Mr. Walrath, that will be representing rural districts and some of their concerns.

BOARD MEMBER HUGH FRIEDMAN: Thank you. I just wanted to know if you had any position.

MR. McFADDEN: We are favorable of that, yes. Thank you.

CHAIRPERSON LLOYD: Thank you very much. Sorry, Supervisor Roberts.

BOARD MEMBER ROBERTS: Professor Friedman, you have to help me since they would have to pay $25,000 no matter what kind of bus they buy, why do they get three versus two?

BOARD MEMBER HUGH FRIEDMAN: My understanding is the staff was indicating that a replacement bus, if it's
CNG, including infrastructure would be in the neighborhood, I'm using rough numbers, of 130,000.

BOARD MEMBER ROBERTS: No, I understand that. But the question is the school districts themselves are going to have to pay $25,000 per bus no matter what kind of bus they buy, so for them that's not a question. In other words they're going to pay $25,000, there's not a difference in the cost to the school districts.

BOARD MEMBER HUGH FRIEDMAN: Well, but the cost out of this fund, it will go further and it will provide more buses.

BOARD MEMBER ROBERTS: You're saying there's potentially more buses, but for the school districts, they're still going to have to spend $25,000 per bus.

BOARD MEMBER HUGH FRIEDMAN: Yeah, but they'll get more buses. I mean, it's between 300 buses and 400 buses.

BOARD MEMBER ROBERTS: They're going to get more buses if they got more money.

MR. McFADDEN: The match is still prohibitive, that's the bottom line.

BOARD MEMBER HUGH FRIEDMAN: Well, I'm ignoring the match even. I'm asking if assuming you could get more buses. Is there any doubt in your mind, Ron, that there's a difference in cost and that you would get more buses,
setting aside --

BOARD MEMBER ROBERTS: No, because I mean that's been my experience with the transit district, the differential that you're quoting seems to be significantly different from what our experience is, but I'm not debating that.

BOARD MEMBER HUGH FRIEDMAN: I don't have experience. I'm going on what the staff told me.

BOARD MEMBER ROBERTS: That's not what we've experienced with transit buses.

CHAIRPERSON LLOYD: Mr. McKinnon.

BOARD MEMBER McKINNON: I have a question of this speaker and probably --

CHAIRPERSON LLOYD: Mr. McFadden.

BOARD MEMBER McKINNON: If we tried to incentivize getting rid of the oldest buses by lowering the match on the oldest buses for the purchase of new buses, not retrofitting, for the purchase of new buses, is that something that would be helpful to let's say the school districts that are having the hardest time?

MR. McFADDEN: I think the considering -- I think it's a step in the right direction, I mean, I think.

BOARD MEMBER RIORDAN: Heads are nodding.

MR. McFADDEN: No, I think yeah, we would be very supportive of something like that.
CHAIRPERSON LLOYD: Thank you.

We have Dave Randall, Doug Snyder.

MR. RANDALL: Good evening Dr. Lloyd and members of the Air Resources Board. You have a little from -- I'm Dave Randall from the California Association of School Business Officials. I'm also the Director of Transportation for the Vista Unified School District.

You have a letter that came in and it will give you a lot of the detail. That's not what I want to talk about tonight. I want to hit some of the points that are in there, though, and maybe I can answer some of the questions that have been raised here today.

First, I need to tell you that, with your staff present, they really listened to us in October and we had a great meeting in October after the other two meetings.

And the things that we see in the staff report, we are very much appreciative of. And we see this as a win-win for everyone here.

We have $50 million that does not come out of school district money that is specifically designated for school buses. That's great in the state of California, because we want to boost the number of children who are on yellow school buses. We also want to make them as clean and as safe as we possibly can.

CASBO takes the position that we're into fuel
neutral. Now, I'm not a technician so I'm not going to
get into the other piece. But what I need to say to you
is that whoever can meet the standard, and maybe we will
have a floating standard, and maybe we'll have the
building blocks that we talked about here, but we want to
get buses out there that do the job for everyone. Now,
the problem in school districts is that when you look at a
school board and you say I want to buy a school bus, they
look and see which checkbook does it come out of and how
can we pay for this.

And everything is down to the dollar. And so
what I'm going to say is that with the scarce dollars that
are out there, and the fact that school funding is really
a complicated issue, we're saying that we would like to
see the match set aside. Now, there are issues that can

When a school district looks to buy a bus, they
also look to see whether they're going to be putting money
in the classroom and is that money going to come out of
there. It would be nice if every school district in the
State of California had a bus replacement program.
Usually, what happens is when it's time to retire a bus,
they look and see if they can pay for it.

With the programs that have come on, and they are
great in the state for the education of our students, but
those programs that are class-size reduction and the other
ones have put a greater demand on the support services
including transportation. So we're doing more with the
same thing. And in a lot of cases, we're being asked to
run the bus just one more year and then we'll see if we
can fund it.

And I realize at your level 25,000 looks like you
could get another bus out there, but on some of the
smaller districts, it will mean that they will not replace
that bus. They won't do it. They'll wait for something
else to come along that would allow us to do that. So if
there's a way to look at the match, we would greatly
appreciate that.

In my letter you'll see, and I don't mean to go
after your trap program, but I have an issue with it, only

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in the fact that if the traps cost $7,000 and we're going
to use low sulfur on only those buses, but we're going to
require the rest of the fleet to also operate under low
sulfur, then the cost increase for that transportation
director is going to add that five cents a mile to all
those other buses that operate.

If we're going to do a retrofit program, great,
can we do the whole fleet, and now we're back down to
allocations of dollars. So if we have a program, maybe
the issue is we need to look at the whole fleet in that
area. And I'm not advocating putting it all in one pot, but you're asking to spend other dollars as you do that. So if there's a reallocation of any of these, you know, I'd like to see a 50/50 split, maybe this year in that. And if we can get a retrofit program, where the traps are a little bit more available and a little bit less expensive where the fleet could go in and go do the whole thing at once, it would really be great for us.

CHAIRPERSON LLOYD: Three minutes. If you could wrap up.

MR. RANDALL: I've got one more statement, and this is the last one and I thank you very much for this. This is a great step in the right direction. I applaud all the actions that have been taken by this Board. We need not lose the momentum that we have right now. We would like to see and we've talked 50. We'd like to see a hundred million out there for school buses. We could do a lot with the retrofit program. We could also do the other things to get some buses out to the school district. And I, you know, would -- we here in CASBO are ready to work with you for next year's funding.

Thank you.

CHAIRPERSON LLOYD: Yes, Ms. D'Adamo.

BOARD MEMBER D'ADAMO: Would you say that there are any trends out there in terms of the school districts
that have a greater problem with the ability to meet the match in terms of where they fit in with the pre-77 buses and air quality status of nonattainment?

MR. RANDALL: Actually in my experience, what's happened is the larger districts have had an opportunity to play in the CATS program and most of their pre-77 buses have gone. You'll find a lot of the other pre-77s in your smaller districts, which, in a roundabout answer to your question, is, yes, they would have a harder time coming up with the match because their fleets are probably smaller.

BOARD MEMBER D'ADAMO: Could staff respond to the issue of nonattainment status and whether or not there seem to be any trends with regard to the smaller rural districts and where they are, central valley, north coast, where do they fit in in terms of the attainment status?

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MOBILE SOURCE CONTROL DIVISION CHIEF CROSS: Many of them are attainment because of their rural nature, but I think that we should refocus back on the issue of PM. In other words, the issue here is not the ozone attainment as much as it is the localized exposure of kids to PM. And I don't think that's a rural urban issue.

EXECUTIVE OFFICER KENNY: Actually, if I might try to add a little bit of assistance, the staff has put together essentially a table of all the different school districts throughout the state and when you look at those
tables of the different school districts, what we find is essentially the smaller districts are essentially pretty well distributed all over the place. We can find small school districts in Los Angeles as well as finding small school districts in places like Trinity County.

And so it's a little bit difficult, I guess, to generalize it and say we're finding them in one particular part of the state. They really do seem to be fairly distributed.

BOARD MEMBER D'ADAMO: Okay. Now, maybe if we could go back to, and I don't know if you'd be able to speak to this or staff would, but the previous witness raised the issue of a formula in transportation funding, a J141 form. First of all, were you aware of this formula and did staff consider, perhaps, consideration of that,

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and if utilization of that approach would help to target both the problem of need and also the pre-77 issue?

PLANNING AND REGULATORY DEVELOPMENT MANAGER KEMENA: No. We weren't aware of that formula. My understanding from the testimony, though, was that formula related to the percent of funding that the school district got from the State. And I was not clear how that is a reflection on ability to pay.

MR. RANDALL: Let me help you a little bit and a couple of my colleagues following me will be able to give
you a little more detail on it. J141 is a reporting form that's used for all school districts to report their transportation costs to the State. From that form, we get a certain apportionment back to cover a very small portion of our transportation costs.

It's based on the amount of monies we need to spend for it, and the monies we get back from the State. There are certain things that we cannot claim on there and purchasing of new school buses is one of them.

But it's really a formula that's used throughout the State to allocate the pot of monies for home to school transportation. And I'll let one of my other colleagues who's coming up behind me give you the mechanics of that form.

CHAIRPERSON LLOYD: Mr. McKinnon.

BOARD MEMBER McKINNON: I heard something you said and I think we have someone that can kind of, with practical experience, walk us through this. You were mentioning some concern about retrofitting some of the buses and not retrofitting others and fuel, and I guess what I'm interested in is kind of your impressions on the manageability of having two fuels and that kind of thing, what you're going to do about that?

MR. RANDALL: It presents some significant problems. In some areas you share fueling facilities with
other cities or municipal agencies, so you'd have to have
Green Diesel or clean diesel, low sulfur fuel in there for
all the vehicles. And I guess my concern was if I only
have seven buses that qualify under the replacement
program for the retrofit and then I've got to run low
sulfur in my other 70 buses that I'm running, I'm paying
an extra five cents a gallon for that, and I recognize
down the line we're going to go to low sulfur, and that's
great, and I think we need to get there.
If at the same time the technology could help us
bring the cost down on the traps, so that they would be
more affordable to go in, then it would -- then you could
go in and do a fleet in a fell swoop and get it all done
as opposed to only having a limited amount of monies to go
in and retrofit the buses.

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BOARD MEMBER McKINNON: Thanks.

CHAIRPERSON LLOYD: Yes, Mrs. Riordan.

BOARD MEMBER RIORDAN: Just to follow along on
the idea of the pre-1997 buses and how they are
distributed. In looking at this table, and I'm asking the
staff, in looking at this table, it appears to me that
it's pretty well distributed throughout the State, kind of
proportionate. For instance, some of the smaller
districts, maybe the proportion is a little bit higher,
but they do have some pre-1997 buses, but they also have a
smaller pot of money to utilize if it's distributed, you
know, sort of through the process, where the larger
districts, again, have a lot of pre-1977 buses.
So that it looks to me like if you were to
eliminate the match on the pre -- or reduce it, either
eliminate it or -- pre-1977, excuse me -- eliminate it or
reduce it, that would basically flow to most every air
pollution control district throughout the State of
California. It doesn't look like anybody's any better
off, am I right in looking at that, that it's pretty wide
distribution?
EXECUTIVE DIRECTOR KENNY: No, I think, actually,
you're probably fairly accurate in terms of what is
happening in terms of pre-77 buses and the distribution of
money. The consequence is that we then have a smaller
pool of overall dollars, which will result in fewer buses
statewide.
BOARD MEMBER RIORDAN: That's true. But it's
hard to figure out a way to help the truly poorer school
districts and then allow for some other distribution
formula for those districts who can probably truly think
that to pay $25,000 for a new school bus is a real
bargain, I mean, a true bargain. So I don't know how to
distribute that. But at least everybody seems to have at
least those pre-1977 buses.
MR. RANDALL: We appreciate your dilemma and we appreciate the fact that there's some money for school buses.

Thank you very much.

CHAIRPERSON LLOYD: Thank you. Doug Snyder, Kirk Hunter.

MR. SNYDER: Thank you, Dr. Lloyd and members of the Board. My name is Doug Snyder and I'm here this evening representing the California Association of School Transportation Officials, CASTO. CASTO is a school transportation industry organization representing over 2,500 members and representing over 80 school districts in the State of California.

We'd like to take this opportunity to thank Governor Davis for his allocation of 50 million for a much needed school bus replacement program in the State. And we'd also like to take this opportunity to thank the Air Resources Board and their very competent staff for being very receptive and considering all concerns and recommendations from the school transportation industry.

We have a couple areas of concern that we'd like to address today. First of all, let me just offer our support for the fuel neutrality portion of the staff's recommendations and the proposal before you tonight and that is because it meets the needs of a greater number of
school districts in the State. Not everybody has the
ability to develop the infrastructure for CNG. So the
alternative does meet more school district's needs and
does reduce pollution.

I'd like to follow-up a little bit on the school
district match portion. I've enclosed in my handouts to
you tonight a graph, it's actually the second graph, and
it's entitled 1998/99 Transportation Statistics For
California School Districts. If you look at the right
side of the graph, there is expenses and apportionment for
school districts listed by counties. And as you can see
that all counties are underfunded for their school
transportation program, all school districts underfunded
for their school transportation program.

And, in fact, the statewide average of
encroachment into the General Fund, monies and programs
that are competing for classroom dollars is about 55
percent on a statewide average. And, in fact, that
encroachment is disproportionate for rural districts as
compared to urban districts. So I'd just like to bring
that to your attention. And it is hard for school
districts to get that match because they are in direct
competition for the programs that the gentlemen from the
school administrators talked about, all the important
things that we're doing for our children in the classroom.
So that is a problem for some school districts.

The other thing that I would like to address tonight is the population based allocation of the school buses. We believe that the oldest bus should be replaced first. We need to get the oldest pre-77 buses off the road first. They do not meet today's safety standards for compartmentalization, rollover protection, all those important things that we trust our school buses to have. The oldest buses need to get replaced first.

And, generally, in rural districts, those children ride further and are on the bus longer than in urban districts. And they're affected more. So we would like to see -- that's the only fair way we see to allocate the money, oldest bus first.

CHAIRPERSON LLOYD: Three minutes.

MR. SNYDER: Lastly, I would like to encourage the Board to make a recommendation to the Governor through a budget change proposal for $100 million to continue this program, because as you can see in the other graph that I've supplied to you, there are approximately 30 children killed every year during school transportation hours in passenger vehicles on their way to and from school, and about 20 children killed every year as pedestrians on their way to and from school.

And as one gentleman mentioned, only 16 percent
of children utilize school buses. Buy increasing that percentage, we will protect more children's lives than we do now.

Thank you.

CHAIRPERSON LLOYD: Thank you.

Ms. D'Adamo.

BOARD MEMBER D'ADAMO: Yes. I'll ask you, and if the other witnesses that are coming up could be mindful of this as well, I'm interested in learning more about the J141 formula and how that would fit in, say, on a sliding scale. Is it geared, is the whole purpose to determine --

MR. SNYDER: The J141 is not necessarily a formula. The J141 is a reporting mechanism for school districts to report, like the last gentlemen said, their expenses and miles and those kind of things to the Department of Education, School Finance Division. Then because of a formula that was established in 1983, I believe, that allocation for their transportation expenses is based on that base year, which is 17 years old, and that's why school districts are so underfunded.

It is somewhat equitable across the board in the way it's disbursed, but you could come up with a logical way to buy down the match if that's what you're looking for, from that process, by taking miles and costs or amount of students in working with staff to come up with
some formula that would work and be equitable to all in that regard.

BOARD MEMBER D'ADAMO: But it's based upon need and not ability to pay.

MR. SNYDER: It's based upon miles and students only, not anything else.

CHAIRPERSON LLOYD: Supervisor.

Thank you.

Kirk Hunter, Steven Stetson, Ranson Roser, Victor Ogrey.

MR. HUNTER: Good evening, Dr. Lloyd and members of the Board. Thank you very much. My name is Kirk Hunter. I am the Director of the Southwest Transportation Agency and I handle ten school districts in rural Fresno county, busing about 6,000 students a day. I have two issues to address. But before I go there, I just wanted to let this Board know and Dr. Lloyd that the staff has been wonderful, they're a class act. I've had a chance to work with them with this program for a couple of months and they're a bunch of great folks. And I just want to tell them thanks.

The match, to give you a practical example of how the match works for me at Southwest Transportation. My budget this year is a million seven, my reimbursement from the State is one million dollars. I take $700,000 out of

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the general fund of ten school districts this year for transportation services, add another 25,000 or however many buses that we would get, that's just directly out of the classroom.

We have no pre-77 buses at this time, but do have a couple of pre-86's, so it's just direct money out of the classroom. And that's the reason you're going to hear "we want it to go away," because it's just not there.

The other area I'd like to address is the allocation. I, too, am a very large advocate of pre-77 buses first and only, and do not go past pre-77 until such time as the money or the buses run out and we need to move on forward. Staff did an excellent job trying to reach that goal of pre-77, but stopped just short by still allowing pre-87.

If we're going to really be concerned with the health and safety of the children of this State, we have to go all the way and not just halfway. We can't just concern ourselves with air quality, we also have to concern ourselves with the environment inside the bus. And by replacing pre-77 buses, it's a complete safety picture. They get the inside of the bus as well as the outside of the bus.

And I would also like to see the Board cap the number of buses that somebody could get in this program to
ten. That way it would be fair and it would be spread a
lot wider. Just as a hypothetical situation, let's assume
that a school district would ask for 100 buses. Absent a
cap, if their name comes up, they could get 100 buses.
And that's just not appropriate nor fair when you're
trying to reach 24,000 buses or 979 school districts in
the State of California.

Thanks.

CHAIRPERSON LLOYD: Thank you very much.
Questions or comments?
Thank you.

Steven Stetson.

MR. STETSON: I'm Steven Stetson. I'm here to
comment on the proceedings today in three different areas.
First, in a legal sense, secondly in a structural form and

then just kind of some of the priorities that have come
up.

There's been a lot of talk of specifics, but it
seems that California being in violation of federal clean
air standards is held to use best available current
technology in upgrading transportation systems to reach
standards set by the federal Clean Air Act.

If you do that, then you probably won't go to
Green Diesel. We're currently in violation of those
standards. So if you just look at it in that sense,
there's really no choice, you have to go with --

CHAIRPERSON LLOYD: I can recognize the priority here was for toxic air contaminant, diesel particulate.

MR. STETSON: Well, NOx is too, though, I think.

I could be wrong.

CHAIRPERSON LLOYD: You could be wrong. You definitely are wrong.

MR. STETSON: Okay. Well, let's go over to structural items. I noticed that $15 million will purchase roughly 150 buses with Green Diesel. The other technology, compressed gas, would purchase roughly 115. That's a difference of about 30 buses statewide out of 16,000. That's a very small difference, a very small difference. So I think a lot was made of that. And in lieu of the 16,000 bus need, it's just not that important.

Also, the priorities, matching funds, that's going to be impossible for a lot of districts. That's already been talked about. One thing about the NOx standards, you will be protecting the majority of the population of children, but when it comes to the elderly and asthmatics, you cite a level of .25 parts per million damaging asthmatics and susceptible individuals in the population. So I think that should be considered also think you should use the best available current technology that is out there whether the specifics are argued ad
infinitum or not, is one thing, but if you just go
straight with that, the choice is already made.

CHAIRPERSON LLOYD: I think, as we've heard today
there's a difference of opinion there. The best available
lowest numbers may be on natural gas or diesel is one, but
for NOx or particulates, you can see one is better or
equivalent to the other, so it's not a straight forward
choice.

MR. STETSON: The figures are in dispute, so if
you go with what you do have --

CHAIRPERSON LLOYD: Thank you. I would like --
by the way, I really do take exception to this handout
here and the direct comment here about Air Board
executives talking about special deals cut and
commissions. I think this is completely unworthy of even

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putting in writing, so --

MR. STETSON: I should retract that. I wrote
this last night kind of late and --

CHAIRPERSON LLOYD: You shouldn't have handed it
out. Don't retract it.

MR. STETSON: May I apologize?

CHAIRPERSON LLOYD: You can see how hard staff
has worked on this issue. We're all committed to this.
We're here to get the facts. We're here also to
distribute the $50 million that the Governor devoted to
the school districts. You hear how grateful they are to this. We take our responsibility very very seriously. We're here to protect public health. We are trying to weigh all the evidence.

And for you to cavalierly write one page here of ill-informed and inflammatory stuff is not acceptable. Thank you.

Next, Ranson Roser, Victory Ogrey and Michael Hulsizer.

MR. ROSER: You'll have to excuse me at this point, I know myself only as number 41.

(Laughter.)

BOARD MEMBER DeSAULNIER: Welcome to Area 51.

(Laughter.)

CHAIRPERSON LLOYD: Do you realize he's actually from Reno?

BOARD MEMBER DeSAULNIER: How appropriate.

(Laughter.)

MR. ROSER: I thank the Board for its time. And my name is Ranson Roser, number 41, from NRG Technologies. I'm an engineer with a small research and development company. My history has been with air quality districts and in low-emission vehicle technologies.

And my comments, that will be very brief, are in line with the previous comments that have talked about a
favorable position towards natural gas in the Board proposal in order to not only use the extremely low emissions that have been achieved by natural gas in the forms of the standards, but also natural gas in terms of enabling technology for other technologies which are coming up on the horizon.

And so with that, my company is actively dealing with the development of hydrogen enriched natural gas, which is basically hydrogen as a supplementation to natural gas. Some might consider it as an additive. And I'll refer to that as HCNG rather than just CNG. And that achieve ultra efficient, clean combustion with that type of fuel mixture and spark ignition engines. The development and commercialization of this technology has been funded by the Department of Energy for the past three years. And in addition to our work at our offices, our data has been substantiated by work at another laboratory.

We currently are working on vehicle demonstrations with Pinnacle West, British Columbia Hydroelectric, Bechtel Nevada and the US Department of Transportation.

The vehicle platforms that we're working on in these development projects include light-duty vehicles, medium-duty and transit bus applications with the first applications in 30 to 40 foot transit buses.
We have recently demonstrated in our laboratories, the attainment of less than .2 grams per horse power hour NOx in a compression ignition engine with these fuel mixtures, simulating conditions to match the torque requirements of the diesel or natural gas base engine that it will replace in the heavy-duty transit bus application.

We expect similar results to be obtained for a project that we will be initiating in Davis, California. Currently, the hydrogen required for the engine fuel is supplied in addition to CNG. Air products and chemicals are supplying this hydrogen for both our Las Vegas and Davis, California projects.

NRG is currently in the development phase of a concept that's patent pending that will create the required hydrogen from the on-board, natural gas in the vehicles. These reformer concepts are brought up with, of course, in the context of fuel cells. It turns out that when you're dealing with internal combustion engines they can run on a wide variety of fuels, these reformer concepts are not so far-fetched, they are much more tangible.

And so in that sense with that technology, of course, we would then be talking about using just the natural gas infrastructure to achieve these low-NOx
emissions, and not specifically talking about a hydrogen infrastructure.

I urge the Committee to support a stronger slide towards the CNG based portion of the proposal. And we hope to, of course, show maybe in the next Board meeting the achievement of maybe less than .1 grams per horse power hour NOx emissions of an internal combustion in a heavy-duty transit bus application.

Thank you very much for your time.

CHAIRPERSON LLOYD: Thank you very much. I would ask the staff, obviously, this round our technology is not quite there, but I think to be able to reduce NOx here by a factor of ten, we'll just ask staff to monitor and work with you on that to see the development and get that bus working in Las Vegas and that would be good.

MR. ROSER: Thank you. Clearly for this context, it's merely to support the CNG based portion of this proposal and I look forward to speaking with the staff.

CHAIRPERSON LLOYD: Thank you.


MR. OGREY: Mr. Chairman, I'm Victor Ogrey. I live in Redding, California, which is in Shasta County. In keeping with your previous admonition earlier this afternoon, I think just about everything I was going to
say has already been said, so I'm sure you'll be pleased to hear that. I would just like to make two points. One I have personally observed in our small transit district in Redding, which has about 13 routes, that at least three of the drivers each day lose their voices about mid-day. And since the transit terminal is enclosed pretty much by a couple of buildings, it seems to me that most of the cause of their losing the voices, is the five to 12 minutes they spend each hour in the terminal breathing the exhaust fumes, because the transit district won't shut their engines off.

In addition to which, I happen to live in a community where they're now proposing to put a second major truck stop across the street from the one existing truck stop we have in Shasta county, which is right next to the I-5 freeway, which has 8,750 trucks passing daily. And this creates a lot of exhaust fumes, especially since it's -- both of these truck stops will be 260 feet from our 500 student elementary school, believe it or not. So I'm very concerned about diesel emissions. And I would hope that -- I'm very pleased to see what is happening here, that you have the $50 million and it will be spent. I'm hopeful that this money will be spent so that we can prove in the period of a year or a recently short period of time that the studies of the alternative
11 fuels are possible and get some hard statistics which will
12 prove which one is best, but moreover it will show this
13 whole series of hearings here have shown how important it
14 is that we do update our school bus fleet in the State of
15 California. And I applaud you for your efforts.
16 Thank you.
17 CHAIRPERSON LLOYD: Thank you very much.
18 Michael Hulsizer.
19 MR. HULSIZER: Thank you, Mr. Chairman. Michael
20 Hulsizer with Kern County Schools. I want to begin, as
21 some other speakers have, by thanking you all. First of
22 all, we want to thank the Governor and staff and the Board
23 for supporting this program.
24 Very early tonight you heard a speaker from
25 Riverside say that schools are in a crisis, and we are.

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two points and provide you with some analysis that I don't think you've quite heard. We are concerned about the proposal of staff because we believe that it disproportionately and unfairly will impact rural and small school districts. And we'd ask you to take a look at two of the proposal provisions from that perspective.

The first is the match. We agree with all the school people who've spoken that are telling you to eliminate the match. But I want to argue with you just for a second or argue to you that the match disproportionately hurts rural and valley schools. And the reason for that is that in rural small school districts we have greater encroachment. And the reason for that is that we bus a much higher percentage of our students.

In the valley, we bus roughly twice the number of the state average. The state average is about 16 percent. In Kern county we bus 32 percent of the students. If you go up into the northern part of the State, the most rural isolated counties, you're looking at 50 and 60 percent of the students being bused. What that translates to is on a per student basis for the school district, encroachment in the urban school districts of this State is about $100 a student districtwide, because they bus only some of them less than ten percent of their students, most of them less
than 15.

In our county, our encroachment costs are $130 per student countywide, that's multiplied by 143,000 students. In the most rural parts of the state, it's up to about $200 a student is the encroachment. Now, because of that disproportionate or inequitable encroachment, to have a flat $25,000 per bus match unfairly discriminates against the smallest most rural districts.

We'd ask you to eliminate the match. If you can't do that, at least have the match be on a per student basis so that the smallest most rural districts are at least equitably treated.

The second point that we'd make is that on the distribution formula, you also, I think, unfairly hurt rural parts of the state, small districts, first of all, because you bus a higher percentage -- first of all, we have a higher percentage of pre-1977 buses in the most rural isolated parts of the state.

In the San Joaquin Valley, where I'm at, 25 percent of the pre-1977 buses in the state are in the valley. We only have about eight percent of the population. That same ratio is about the same in the northern part of the State. If you distribute the money on the basis of population, the San Joaquin valley will get about $3.7 million. If you distribute it and targeted
it pre-1977 buses, you'd provide about $10 million to that area.

The point is, is that if you really mean what you're saying and that you want to equitably reduce the amount of pre-77, the most polluting buses in this state, you will equitably prioritize pre-1977 buses and send the money out equally around the state where those buses most exist.

Mr. Walrath and the small school districts, I think, will expand on this, but we just, from the sense of fairness ask you to look at this rural issue.

Thank you.

CHAIRPERSON LLOYD: Thank you.

Ms. D'Adamo.

BOARD MEMBER D'ADAMO: I'm really troubled by this. At first when I looked at this, population did seem to be the appropriate way to go, but has the staff considered a number of factors that could be accounted for, pre-77 buses, the encroachment issue, the point I was trying to raise earlier, need, is there a way that -- and population, obviously, maybe even population weighted more heavily than some of the other factors.

Could staff speak to that.

EXECUTIVE DIRECTOR KENNY: Well, we actually -- I don't think we looked at the encroachment issue. We did
look at essentially at a pre-77 issue. And what we ended
up determining there was that it actually seemed to be a
reward to those who had not replaced their buses earlier.
And it seemed to be a penalty to those who actually had
actually, you know, taken money out of their budgets and
replaced the pre-77 buses.

And so one of the concerns we had there, from a
population basis or a population pre-77 basis, was that if
we went with the latter, it did seem to essentially not
take into account that simple fact, that some school
districts had recognized that there was a pre-77 bus in
their fleet, or several pre-77 buses and that they had
made budgetary augmentations in order to try to move those
buses out.

And the worry we had was we did not want to
disincentive school districts from moving those buses out
with their own funds, and so that was why we went with a
straight population approach.

BOARD MEMBER D'ADAMO: What about some of the
other factors, though and also, if you could, speak to
that very well may be the case, but then the testimony by
the gentlemen from Mendocino led me to the conclusion that
they're just not going to be able to -- that match,
they're not going to be able to participate in the program
at all.
So in that situation -- there may be a varying degree of pre-77s. There may be certain districts that could afford it and then others that it's not due to any bad faith on their part, they just don't have the dollars.

EXECUTIVE DIRECTOR KENNY: You're absolutely correct. The difficulty we ran into there was that we were looking at essentially how much money we had and how far we could go in terms of that money. And with the available money that we had and using a $25,000 match, we could essentially purchase roughly 400 school buses with the $40 million.

And that really broke down essentially to a little bit more than 200 as CNG and a little less than 200 as diesel. And if we basically eliminate the match, then what we do is we take that 400 number and we basically cut that number by roughly 25 percent, and so suddenly we're down to 300 school buses. And we saw essentially fewer buses being able to be distributed around the state.

And with the large population of school buses in the state, we were trying to at least get the biggest bang for the buck that we could. And I mean it is, obviously, a difficult issue.

The one thing that we were actually playing with a few moments ago was a suggestion by Mr. McKinnon that we look at maybe a different kind of a match associated with
pre-77 buses as a way of trying to equalize this in some fashion, with the idea also being that the pre-77 buses seem to be located in some of the poorer districts, or at least that was the assumption, and so maybe we change the match there a little bit.

Now, we don't know what the exact consequence of that would be, but it will mean that we will have fewer buses. It doesn't mean that we would lose, you know, the same number of buses as if we eliminated the match completely.

BOARD MEMBER D'ADAMO: Yeah. I think we should discuss it further. And maybe in future years, if we could -- because I don't think this would be appropriate at this point, but maybe to have a sliding scale, maybe there are some school districts that could afford more than the 25,000 and so a sliding scale based upon ability to pay. Perhaps some school districts could afford 20, 15 all the way up to, you know, 30 to 40.

EXECUTIVE DIRECTOR KENNY: The difficulty we had with that is that we were, I guess, very uncomfortable trying to figure out what the ability to pay is in essentially, 1,100 school districts throughout the state. We thought that would be almost an impossible task. And especially not knowing, you know, the entire school district system and how the money is basically funded and
what the augmentations are like.
The other thing we did also consider is that there are a number of air districts around the state, which we do anticipate probably providing at least some level of match funding themselves and maybe covering the match fund obligation so that, again, we could extend the money as far as possible and get as many buses as possible.

CHAIRPERSON LLOYD: Did you want to respond?
MR. HULSIZER: Well, I just needed to respond to this argument that you didn't want to reward areas of the state that hadn't replaced their buses. I could accept that argument if the burden, if you will, were equally distributed. But the fact is, it's not so much ability to pay as it is the fact that in the ruralmost -- the small parts of the state, we are busing exponentially more students and that is the reason we haven't -- if there's one reason why we haven't been able to replace buses at the rate of the more urban concentrated parts of the State, they're just not busing as many students, and so it's not as big a burden on their budget.

The encroachment issue, the per student cost of this program is what we're asking you to look at. I'm not -- I think that there's a point to make about low-wealth versus high-wealth districts. But the real
issue is the encroachment, the hit on the district's
general fund budget. And if it's $200 or $130 per student
in the district, that's got to be recognized versus $97 or
$100 per student in the district, the ability to pay is
impacted for small rural.

CHAIRPERSON LLOYD: Ms. D'Adamo, then Mr. McKinnon.

BOARD MEMBER D'ADAMO: The encroachment issue, is
that a term of art, is that information that all school
districts have to have.

MR. HULSIZER: Absolutely, and it goes back to
the J141 but it's not as simple as just looking at the
percentage of revenue versus expenditure. It's taking a
look at the difference between the revenue and the
expenditure and then multiplying that by the total number
of students in the district, that's the real issue.

There are many counties where the encroachment
percentage is right around 50 percent. But if it's 50
percent and you've got a third of the students of the
other area, your encroachment per student is going to be
much greater and that's the number that you need to look
at.

BOARD MEMBER D'ADAMO: And you don't just have
that information per county, it is broken down by school
district?
It is per county. The data is there. It's just a matter of doing the calculation. It would not be difficult to do.

BOARD MEMBER RIORDAN: It's by county or by school district?

MR. HULSIZER: Both. You could do it by local education agency. You could do it by county. There's ways of configuring it, but what it really comes down to is by school district, and you can do that. It's not difficult.

CHAIRPERSON LLOYD: Mr. McKinnon.

BOARD MEMBER McKINNON: The reporting, what is it the J141, is there data collected that would tell us something like the number of student miles traveled per day or something? Is there data collected that could give us that.

MR. HULSIZER: Yeah, I'd refer you to our transportation officials on that. There is and that's another issue as well.

BOARD MEMBER McKINNON: Well, one of my concerns is that I think there's really something we need to do here. And I guess what I would float is dropping it to like ten percent and 10,000 for pre-77 buses, but I have a sense we need another condition. I mean, I'm not really interested in replacing the school buses that move the
football team, occasionally, at an urban high school, right.

But if you're talking about the buses that run around Trinity county or even in the Los Angeles area, there's some very poor school districts here that are a hundred percent pre-77. And I think that's who we ought to be helping. But I'm not sure how we distinguish school districts that easily can make not buying buses okay. I mean, for instance, if you're an urban district, you have two buses at the high school you move the football team with every Friday afternoon. It's easy not to place a priority of buying more buses or new buses. And I'm not sure how we sort that out. And that may be the insurmountable problem for us here.

If you've got -- do you have any ideas?

MR. HULSIZER: I think we would suggest that you start with pre-1997 and equitably distribute the money there. If you really want to impact the issue of the most polluting buses in the state that's where you go. Don't look at student population, because you're going to unfairly and inequitably disproportionately send money to parts of the state that have the lowest per capita usage of buses, of school buses.

BOARD MEMBER McKINNON: What if we looked at student miles traveled divided by buses, right?
MR. HULSIZER: I think the number of miles is an issue. I think that's complicating it, but I certainly cannot deny that's not an issue, because it's a huge issue. In a county with 8,000 square miles, we travel per student a heck of a lot more miles with each student than you're going to find in an urban county, so we would welcome that.

CHAIRPERSON LLOYD: Supervisor DeSaulnier.

BOARD MEMBER DeSAULNIER: Not knowing, but I'm just looking at this list that the California Association of School Transportation Officials gave us, which breaks down the percentage of riders by enrollment. And all of the ten largest urban counties have very small percentages, which answers your question. But on the other hand, my involvement with some of those districts is it's because they have other priorities. They demand from their constituents -- let me just finish my thought -- whereas we still -- it's not that we don't want to get those ridership numbers up, we've got safer routes to school programs, I know, in the Bay Area and I think other urbanized areas, because you're worried about the security of kids and congestion.

So I think, at least for now not understanding that, I'm more comfortable at least with beginning with Matt's suggestion, because -- and maybe you can answer
this, I don't -- is it largely demand, that a rural
county's parents need those school buses?

MR. HULSI2ER: You're talking about school
districts that serve exponentially larger numbers of
square miles. And so, you know, in my county, I've got
school districts that have got to bus 50 percent of their
population. They just have to, because 50 percent their
kids live more than five miles away from the school.

In an urban county that's just not the case. I
don't think we should criticize urban school districts for
not busing more kids. The reality is they're busing the
kids they have to bus. And they have a lower percentage
than we do in rural counties.

BOARD MEMBER DeSAULNIER: I'm worried about
getting on this comparison, not knowing what school
districts base that on and what criteria, knowing that
especially poorer school districts all have funding
problems, in Los Angeles, San Diego, the Bay Area.

And not knowing that, I'm anxious about getting
into this whole debate rather than just dealing with the
pre-77, as Ms. Riordan said, which seems to spread across
the State more evenly.

CHAIRPERSON LLOYD: Dr. Burke and then Supervisor
Roberts.

BOARD MEMBER BURKE: I'll pass.
CHAIRPERSON LLOYD: Supervisor Roberts.

BOARD MEMBER ROBERTS: You know, something is bothering me here. And it's we're getting away from what it is that I thought was the principal focus and that's cleaning the air. And it seems like anybody that represents a school district just wants buses period. And I've got a feeling it doesn't make any difference what kind of buses we sold them or helped them to buy or what the standards are, they just want buses.

And you know what, every one of the school districts wants that. I'm kind of uncomfortable with the direction this is going, because I think in a superficial way there may be some legitimacy to it, but I'm looking at school districts in urban areas that have very much the same problems.

I think Matt's suggestion to be thinking of maybe a different line, I think there should be some match. But I would feel very supportive of maybe reducing that number. But to all of a sudden say, hey, we're going to shift this whole program and heavily weight it in favor of rural areas, I think is -- I would just -- I think maybe what we ought to be doing is looking at the impacts, the air quality impacts, and how are we going to clean up the air and how are we going to make for a healthy environment for more kids.
And I think we're, you know, without exception everybody that's come up here representing a school district has almost completely focused on we've just got to get more buses.

I do have a question for our staff, in all due respect, is it a requirement that if we help buy a bus, they take a bus off the road?

EXECUTIVE DIRECTOR KENNY: Yes, it is.

BOARD MEMBER ROBERTS: That's set. So we know you're going to demo a bus for everyone that --

EXECUTIVE DIRECTOR KENNY: What we had said is basically, if they buy a bus, they have to essentially demo the bus or they have to replace an older dirtier bus, so that in fact, if they -- and what I mean is essentially since we have a limited pool of buses here and we have a lot of dirty buses throughout the state, if, in fact, we replace a dirty bus, there may be a dirtier bus somewhere in the State, we would rather essentially get rid of that dirtier bus by moving the dirty bus.

BOARD MEMBER ROBERTS: So there could be a couple of basically trade downs?

EXECUTIVE DIRECTOR KENNY: Yes, but in the end it disappears.

BOARD MEMBER ROBERTS: But somewhere at the end of that, there is going to be a bus that we're going to
drive into a crushing machine somewhere?

EXECUTIVE DIRECTOR KENNY: Correct. There's a crushing machine somewhere.

BOARD MEMBER HUGH FRIEDMAN: So we have dirt, dirty and dirtier.

BOARD MEMBER ROBERTS: Well, that's what -- I mean if you get the dirtiest -- ultimately if you -- I just want to make sure there is a bus coming off the road for every one that we end up helping to buy.

BOARD MEMBER BURKE: But isn't it the policy of some school districts to sell the buses that they're going to get rid of to Third World Countries.

EXECUTIVE DIRECTOR KENNY: It may be.

BOARD MEMBER BURKE: Isn't it an income stream for them?

EXECUTIVE DIRECTOR KENNY: It may be, but in this particular situation there will be plenty of opportunities, I think, in the State of California where the dirtier buses exist and they can then move a dirty bus, because they now have a newer clean bus.

BOARD MEMBER RIORDAN: But I don't think we want to send some of these buses off to some other area.

BOARD MEMBER BURKE: We're just moving the problem. But what I'm saying is that some school districts use that as an income stream.
BOARD MEMBER RIORDAN: Well, that isn't a good practice.

BOARD MEMBER BURKE: So you know then that's a consideration also. I passed to speak before because, you know, this is a highly emotional issue for me. I was born on a farm, so nobody needs to tell me how far you've got to go to ride a school bus.

But I also drive through the city of Los Angeles, every district, every place, all the time, more than my wife wants me to, but I go anyway. And there are different -- it's like comparing apples and oranges. And the reason you transport kids in an urban environment is a totally different reason than you transfer them in a rural environment.

And quite frankly, I'm glad I was born when I was because I wouldn't want to travel on a school bus in any environment today. But I think our charge here is about the air. And if you look at it like that, I think the staff's recommendation, the population distribution of this money -- now, I have no problem with the 1977 lowering of the match, even though, you know, it goes against the staff's theory of, you know, having those school districts step up to the plate initially.

And, you know, Matt, I knew that you were an athlete, but the days of having a bus sit around and
taking the team on Fridays doesn't exist anymore. Well, maybe where you're at, but let me --

BOARD MEMBER McKINNON: Sacramento schools, you've got be kidding, but --

BOARD MEMBER BURKE: Okay, but I guarantee you if you go down to the Los Angeles school district, it's just crazy down there.

MR. HULSIZER: I'm sorry, I just need to say one thing. The organization I work for has no pre-1977 buses. If you distribute the money on the basis of 1977 buses equitably, my organization will get not a dime. If you want to clean the air, you'll distribute the money on the basis of 1977 buses pre-77 equitably around the State.

CHAIRPERSON LLOYD: Ms. D'Adamo.

BOARD MEMBER D'ADAMO: Well, I think that there are just so many different ways of doing this, and we just don't have all the information before us right now. Maybe if there's a way to do what Mr. McKinnon suggested on the match issue.

But I would propose that for next year we look at this formula closely, because even though the encroachment issue may weigh it more heavily than what it should be for rural districts, I think the population factoring solely weighs it disproportionately in favor of urban areas,
particularly if there are all these great distances to be traveled. And it's not just about air quality, it's about proximity to the buses, PM and exposure standing outside the bus and riding the bus.

CHAIRPERSON LLOYD: I think I agree, it is a very complicated issue. I think what's suggested in the interest of time here, we've got -- it's now 7:10 and we've still got another eight witnesses, maybe what we should do is get the witnesses to focus on some of the issues which maybe have not been addressed so then we can have this discussion, maybe take a break -- but we now have Veronica Dale Muchmore and I guess you're going to speak for two people.

MS. MUCHMORE: Yes, I am. I'm going to speak for Charlie Ott first. He's director of transportation for PETERS SHORTHAND REPORTING CORPORATION  (916) 362-2345

Yuba City Unified School District, which is one of your more rural districts. And I represent East Side Union High School District in the City of San Jose, and we have over 25,000 ADA in our school district. So we're one of your bigger city ones.

Let me read Charlie's letter first because I think he will put some of my own thoughts in here.

It says, "Dear Air Resources Board Members. I'd like to apologize for not being able to speak in front of you
today. I intended to do so, but due to the agenda, I had other obligations this afternoon.

"I am writing this letter to ask you to please consider remaining neutral on the types of fuel allowed in the lower emission school bus program. Many small to medium school districts within the State of California do not have the option of natural gas. If we do, the infrastructure is so extensive that we could not even consider it."

And a good point is you need to understand how much infrastructure really does cost to support CNG if you do not have it in your area or if you are not already equipped at your site to handle CNG. I have a background in setting up infrastructure here locally.

"By you remaining neutral, we have a choice in how we can do our part in lowering emissions. Our jobs as school district transportation directors is education. Sometimes we get caught up in the politics, but that is not what we are here for. We ask students to keep an open mind so that their learning
ability can increase. We expect them to see things clearly and make objective decisions.

"For the sake of all children in the public school system, as well as the small school districts that service them, please keep an open mind and be objective. Allow us, the people whom you have entrusted to run your school transportation units, to have a choice when it comes to alternative fuels.

"Thank you, Charles Ott."

CHAIRPERSON LLOYD: Thank you.

MS. MUCHMORE: He put that very well. There were some other issues that I noticed that have come up. A little background, I've been driving school buses since I was 18. I have over 25 years in this industry from the ground up. I didn't start out in college to be a school bus driver, but somehow I ended up doing it.

I've worked with CNG. I've helped at a previous facility I worked at, we worked on different agencies to test alternative types of fuels including pure NOx, which is a water emulsion fuel based with diesel. The test results were quite interesting. We ran methanol.

Fortunately, we were not part of the test program
for electric school buses. I would never recommend anyone
go that way again. But the differences between where I
was from and where I'm at now, even though they're both
city school districts, are that previously someone else
started the CNG program, and I expanded on it. And we had
the support mechanism from both the local air district and
from the school board to do that.

Where I'm at now, I don't have that support. I
don't have the ability to replace my pre-77s and I have
quite a few of them. If you're talking about what happens
and why school districts are worried about replacing
pre-77's -- and quite a few of us in the audience took
offense to Supervisor Roberts' comments about why we're
here.

We're here and we're in this industry because

this is where we want to be. We chose to be here and this
is our passion. These people in this
industry don't make big bucks, and it's a struggle for us
as directors everyday to keep these people happy and to
keep the equipment running and to keep our shops updated.
It's not easy. So, of course, we want more, you know,
bang for the buck as you have put it.

CHAIRPERSON LLOYD: You used pretty well all of
your time, unless you've got some salient points here.

MS. MUCHMORE: There were several things that
were made. Just to make a statement, I am a taxpayer. I
heard people make remarks about taxpayers. I'm a
taxpayer. I heard other remarks about cancer. I'm a
cancer survivor. So, you know what, please keep fuel
neutral. Allow us, the people that we've entrusted, to do
our jobs and to do them right.

Thank you.

CHAIRPERSON LLOYD: Thank you very much.

Dr. Burke.

BOARD MEMBER BURKE: Two things. One, did staff
consider just taking this money that they've divided up
and giving it to local air districts and letting them take
all this testimony? Did they ever think about that?

(Laughter.)

BOARD MEMBER BURKE: You know, and let the school
districts then make their own decision on whether they
want, you know, CNG or diesel or retrofit?

EXECUTIVE DIRECTOR KENNY: We are now, right?

Actually, we did not.

(Laughter.)

BOARD MEMBER McKINNON: So moved.

(Laughter.)

BOARD MEMBER BURKE: Second point, that you know
some people should not -- I assume everybody knows that
T-bone Pickens has formed a company which will provide
four school districts and other institutional groups CNG
refueling facilities at no cost based on the entrance into
a supply contract. So when you talk about the support of
refueling --
CHAIRPERSON LLOYD: Not quite at no cost. He
gets it back in the end.
BOARD MEMBER BURKE: Well, he's not a
philanthropist.
(Laughter.)
CHAIRPERSON LLOYD: Anyway, we need to move on.
Mark Fairbanks, David Walrath and Ralph Knight.
MR. FAIRBANKS: Good evening, Chairman Lloyd, and
Board Members. My name is Mark Fairbanks. I'm the
Director of Transportation up at Calaveras Unified School
District.

I am one of those rural communities that
transport approximately 55 percent of our student
population. And we do this over a 600-square mile area.
We're basically two-thirds of the county as one district.
We're actually one district that would be hurt by the
thought of population based funding because we don't have
the population in the area. In fact, our school district
has 4,000 students. And, like I said, we transport well
over half and we cover approximately 800,000 miles based
on what we did last year, based on trips and other things
that we do throughout the year.

Now, by not replacing any buses or getting any funding for that, of course, you know, we are traveling more miles than you would see some buses in an urban area. So, in a sense, we are polluting the atmosphere more, running the older buses that we are running. So we would definitely want you to consider the stance of being population based as far as basing the funding.

As far as waiting, you know, the funds need to be allocated now, and I understand that. And I heard that we need to focus on clean air, which is why we're here. But as was already mentioned, the 77 and pre-77 buses are the most polluting buses that are out on the road.

So, you know, of course, being transportation, we look at the safety first, because that's most important to us. But if you can get the safest vehicle and the cleanest vehicle to replace those that are polluting the most, of course, that would be the more appropriate to do so. We would encourage you to look at replacing all the pre-77 buses and going through that.

By the way, I appreciate what your staff has done and all the hard work they've put in. Going into the thought of being fuel neutral, I appreciate the different things that have been brought up as far as natural gas, the Green Diesel and propane. Now, I note you were
talking a little bit about propane. My background in this industry, of course, started as a mechanic. Using propane powered buses in our area wouldn't work because of the great ability or the power issues that we have to deal with in the mountains.

Fueling becomes the issue when it talks about natural gas, so really only the viable solution for us is a Green Diesel. So, anyhow, we would ask that the Board here consider the population-based area and also that they look to replace all the pre-77 buses.

CHAIRPERSON LLOYD: Thank you.

David Walrath, Ralph Knight, Claudia Sherrill.

MR. WALRATH: Good evening. My name is Dave Walrath. I'm the Executive Director of the Small School Districts Association. It is a pleasure to be here. It's a pleasure to be talking about $40 million.

You have multiple goals. I'm not sure if anybody could have kept track of the number of agendas that have been presented before you today. I'm presenting one more. I want to cover two points of comment on the staff recommendations. But before hitting those, I want to compliment staff. I think you've done an excellent job like many other people, $40 million for cleaner air, for safer buses, better programs for students, how could anybody complain.
So my comments are not in the form of complaint, they're in the form of hopeful comments and considerations in the allocation mechanism. There have been comments on the ability of small school districts to make a match.

In my written testimony, I suggest you do a per ADA match requirement. A district of 500 students paying potentially $10 per student, which would be $5,000. In a district of a thousand students, $10 would be 10,000, but no more than 50 percent of the replacement cost of the school bus is to be replaced.

The 50 percent figure comes from the last time we did school bus replacement, $35 million appropriation trailer bill to the budget had a 50/50 match requirement. Most small districts were unable to participate in that program. However, he 50 percent maximum amount is a precedent you may want to consider.

Ten dollars per ADA. How do I come to this figure? Approximately 400 school buses to be replaced, a $25,000 match per bus, approximately $10 million. Ten dollars per ADA, if you have a million ADA in the state and school districts participating in this program, approximately a sixth of this ADA of the state, then that's approximately $10 million again.

Instead of having a disproportionately high cost to a small district replacing one bus, be it a 1977 or a
1986, instead it would be proportionable to the ability to pay. And the ability to pay depends upon your revenue. And our revenue comes as a per ADA revenue source in the revenue line. Fewer kids, the less money you get. More kids, more money you get. Per ADA is what we'd recommend you take a look at as far as a match mechanism.

On the distribution on the allocation, representing school districts, yes we'd very much like to have solely pre-1977, but that's just one of the agendas. You have multiple. And one is clean air, the purpose of why the money was given to you. It would have been given to the Department of Education if it was just going to be going to -- for the purpose of replacing school buses.

Multiple agendas. Population covers part of the issue on clean air. Pre-77 covers part. We request you look at instead of using simply pre-77 or simply population, some sort of a blend of the two. We would suggest using proportion pre-1987, looking at the fact that pre-87 buses, 1984 buses as polluting as -- are generally as polluting as a 1997 bus, will better represent the needs of the San Joaquin Valley in their number of buses that are pre-77 or pre-87.

That brings them closer to the pre-77 amount they would have, more than they would have under population. Other areas would have a little bit less than they would
have under population, but more than what we would have received under the pre-77.

We think in 1987, you will give balance as you try to look at how to deal with these issues. With that, thank you, and I'll be pleased to answer any questions you might have.

CHAIRPERSON LLOYD: Thank you very much.
Questions or comments?
Thank you very much.
MR. WALRATH: Thank you.
CHAIRPERSON LLOYD: Ralph Knight, Claudia Sherrill and lastly Phil Hendrix.

MS. Sherrill: Good evening, I'm Ralph Knight.
(Laughter.)
CHAIRPERSON LLOYD: Yes. Did we lose Ralph?

MS. Sherrill: We lost Ralph. He waited all day and had to leave. My name is Claudia Sherrill, Director of Transportation for the Elk Grove School District right here in the Sacramento area.

I think you've probably left the best for last, meaning school districts to respond to you last. I want to thank you for this opportunity. School dollars are hard to come by in any fashion. When they're dedicated for the yellow school bus, we take part.

I would ask that you give me the respect of being
able to address you and give you the information that I had planned on earlier in the day. It does repeat much of what you've heard, but it may have just a little different twist.

As a school district representative, I want to thank and show our gratitude for the $50 million Governor Davis has made available to improve the safety and health of the school students utilizing school buses in the State of California, their health, by means of improving the fuel source and their safety by originally attaching this money to the replacement and demise of the pre-77 buses.

I emphasize original, because with the expansion of the 87 buses, 1987 buses, we are missing a critical opportunity. We in the school bus industry preach safety, we teach safety and then when we fail to recognize the priority and the impact that this money could do by replacing first the 1977 buses not by population but by all 1977 buses.

Throughout the State you've heard a lot of dialogue here. I'm not going to repeat it. I'm not here as a school district that will receive any of those. We have none. I believe in my industry we need to replace the pre-77 buses throughout this State, that's critical.

Secondly, if compressed natural gas is an available source, that should be the fuel of priority. If
it is not available, then the smaller school districts
should not be held hostage, if you will, and not be able
to participate. If the cleaner fuel is available for them
through diesel, then that should be what they are allowed
to replace.

The proposed $10 million for diesel traps, I
would propose that we only postpone that. The school
districts and the school industry has been a target of
demonstration programs, much of which has been successful.
But as a manager of a large school district, when I don't
put a bus on the road to transport kids every day,
someone, beginning with the Superintendent of my school
board, wants to know why.

And it's very difficult to say, you know what, we
stepped up to bat and we're participating in a clean air

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program. But the tests weren't complete and we're
suffering, our equipment isn't running day-to-day. So I
would simply ask that the traps be postponed until we have
all the information needed.

Lastly, continued funding of this allocation of
dollars not only in next year's budget but for in budgeted
years in the future, school district transportation needs
your help. We need to be partners with you. I hope that
nothing you've heard here today is a negative from the
school districts in particular. We appreciate what you're
We appreciate the very difficult decision that you have.

We are interested not just in getting a bus in our fleet, but we're interested in safe transportation of all children. I applaud you. I applaud the staff. Thank you. I feel like we've come to know each other and you have a very tough decision to make.

CHAIRPERSON LLOYD: Thank you and thank you for bringing the bus outside there as well.

MS. Sherrill: You're welcome. Isn't it pretty?

CHAIRPERSON LLOYD: It sure is, yes.

The last name is Phil Hendrix.

Not here.

No one else.

Okay. Now, I guess we can open it up for discussion.

EXECUTIVE DIRECTOR KENNY: I think I would like to make a few comments. I think, basically, probably the comment that's most appropriate is you've now had a chance to share the staff's pain.

(Laughter.)
EXECUTIVE DIRECTOR KENNY: As you can see, there are a multitude of issues that we have been trying to wrestle with in terms of the proposal that we brought to you. And quite fundamentally and quite simply the biggest difficulty that we have had has been that there are roughly 1,100 school districts in this State.

And what we are proposing is something that can only provide 400 new school buses. And so we cannot even provide a single new school bus for every school district in the State.

In addition to that, what we have been trying to do is wrestle or compare or balance that with the air quality issues that are associated with this particular proposal. From a purely staff perspective, given our druthers, given our purely air quality desires, we would have proposed to you $50 million for traps and no school buses because we thought that was the best air quality thing to do.

At the same time, we recognize that this was a bigger issue than simply going in that direction. And what we tried to do is recognize that there was an issue here of providing new school buses to the school districts around the State. We tried to recognize that what the Governor was looking at was essentially replacing older school buses throughout the state, even on a more limited
basis because of the money we had available.

We took that into account when we looked at essentially the different types of technologies. And what we were doing there is looking at whether or not any particular technology should be advantaged solely over all the rest. And our conclusion was that it should not, because what would happen is that if we did that, we would lose air quality benefits, we would reduce the number of buses, and we would not be able to provide the greatest benefit to the greatest number of people.

So what we did in the end is take essentially all the issues that you've heard today and we reached a conclusion that we thought balanced all those issues in a way that was most appropriate. We provided CNG buses in a substantial volume, so that, in fact, they would be available in big portions of the State. We provided diesel buses because we do think it was important to have them available in the State and we also recognized that what International did was bring a bus in that is cleaner than the four gram standards to which they are currently obligated to produce buses.

And then lastly what we did is we made sure that, in fact, we continued to have the traps out there, because, in fact, what was most important about all of this is the PM. NOx is very important, but in line with
what the Board basically directed us to do, just in
September, we are looking at trying to figure out
strategies to reduce PM, because in the bottom line
assessment what we have to do is figure out how to reduce
the PM, because that gives us the biggest benefit in terms
of cancer reduction.

And so in the end, the proposal we brought to you
was one that was as balanced as we could kind of make it,
and at the same time try to address as many of the
constituent issues as could be addressed.

CHAIRPERSON LLOYD: Thank you very much. The
suggestion I'd have for the Board is that we look at the
areas here, for example the fuel splits, how do we fit
propane into this also with all the traps and the
proportion right there. And then the issue we heard from

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the school districts, the match and then the allocation of
buses.

So maybe first what we'll address is are we
comfortable with where we are in terms of the splits
between the diesel and the alt fuels, which is
predominantly natural gas?

Supervisor Roberts.

BOARD MEMBER ROBERTS: Okay. I'll start it. And
let's go back to the comments that I made earlier where it
seemed to me that from an air quality standpoint, that to
have the very smallest amount that's going to the
retrofit, the larger amount that's going to the Green
Diesel and then those two adding up to half of the pot,
the other half of the pot going to the CNG. That like the
split 50/50, but I would --

CHAIRPERSON LLOYD: That's fine. That was my
first issue there. So you like that part of it?

BOARD MEMBER ROBERTS: Yeah, but I don't like
the --

CHAIRPERSON LLOYD: Yeah, I understand.

BOARD MEMBER ROBERTS: Okay. I thought you were
taking it a step further.

CHAIRPERSON LLOYD: Well, I can, but I'd like to
settle that issue first.

BOARD MEMBER ROBERTS: I like the 50/50, for no
other reason than it's simple and clean.

CHAIRPERSON LLOYD: After today, I understand.

So do we have anybody who might change that?

That's good. Now we get into the diesel part
then, the trap issue vis-a-vis the new Green Diesel.

BOARD MEMBER ROBERTS: For me, the retrofit part
of this, I think, ought to be larger than the clean
diesel. I think there's a number of issues that have been
raised, not the least of which, I mean, we are talking
about something that there is no track record in terms of
the clean diesel, where at least with the retrofit there
is some evidence in terms of the workability over time.
I mean if I had my way, I'd say 20 million on the
retrofit and five million on the clean diesel, which --
and maybe prioritize the clean diesel for those more rural
areas with pre-1977 buses, so you'd in a sense, create a
smaller pot, but focus it on what the most need is for
that particular technology. And maybe that would balance
out some of the concerns of the population base, leave the
population base on the other side, but maybe priorities.
But I would make it a much smaller pot than the
$15 million, which ought to be significant for the fact
that there may only be one company producing these things.

CHAIRPERSON LLOYD: Discussion.

BOARD MEMBER ROBERTS: So for whatever it's
worth, that would be my recommendation.

CHAIRPERSON LLOYD: Yes, Professor Friedman.

BOARD MEMBER HUGH FRIEDMAN: I respect that view,
Ron. I wrestled with this too. But at the end of the
day, and it is now at the end of a very long day for all
of us, I personally have concluded that the staff wrestled
with this for a lot longer than we have. They've heard
all of the views and probably maybe others and many more
of it, much more accumulation of it than we heard today,
and I've gained great respect and more respect and
appreciation for the staff and the job they did in
cobbling this compromise together from the varying agendas
and points of view, all of which deserve careful
consideration.

And it's a delicate balancing act. And we're on
a high wire. And my concern is if we begin to try and
fine tune it collectively and negotiate here in this forum
at this time and in this place and begin to tinker to the
smallest, other considerations will begin to kick in and
I'm not sure we'll end up with any better product.

And so reluctantly I, for one, think that though
there's some arguments that could be made, certainly, good
arguments for changing the allocation within the diesel
path, there's also the issue of retrofits. Are they
available, are they not, I mean how fast, when? I mean

people and districts are saying it takes awhile, and
things are out -- you know, there are other
considerations.

And then we get into all that sort of thing in
terms of timing. So I guess what I'm doing is saying I'd
just as soon not go there where you feel we ought to go.

BOARD MEMBER RIORDAN: Mr. Chairman, I'd like to
agree with Professor Friedman. I also want to provide the
flexibility to the school districts to choose what is
smartest for them. And it seems to me that what the staff
has proposed in the split is indeed that flexibility. It may be, if we're fortunate enough, to have another opportunity we may want to adjust this split. But for this year, I'd really like to see as much flexibility given to our school districts as possible and I believe that is within the split.

CHAIRPERSON LLOYD: Supervisor DeSaulnier.

BOARD MEMBER DeSAULNIER: Maybe in the idea of particular tinkering -- although I can't believe I've been for almost -- we've been talking about this all afternoon and evening and I haven't heard -- I thought Dr. Burke was going to start talking about how I walked to school every day through the snow ten miles.

(Laughter.)

BOARD MEMBER DeSAULNIER: And as Bill Cosby said, uphill both ways.

(Laughter.)

BOARD MEMBER DeSAULNIER: You're almost there.

BOARD MEMBER HUGH FRIEDMAN: We haven't heard about the 10 cent allowance.

BOARD MEMBER DeSAULNIER: He's changed that over the course of his lifetime.

When I started out, you know, a little anxious over not emphasizing enough on the alt fuels route, but I'm okay with the split. I think maybe a variation in
still keeping with flexibility that Ron is suggesting
maybe we could do, in the idea of tinkering, but I just
throw this out for conversation, if we did the 10 million
for retrofit but the other 15 we gave them the option,
they can either do the green buses or they can do any
proportion of that as retrofit?

It's just a suggestion, so you're not mandating
they have to do 20, but you give them the flexibility. It
sounds like they're going to go for the buses anyway, but,
Ron, if you're right, which I'm inclined to think you are,
when they start looking at it, they'll probably see some
value in doing the retrofit as opposed to the buses.

Just a suggestion. You have that look on your
face, Mr. Chairman, that you wished you hadn't called on
me.

(Laughter.)

BOARD MEMBER DeSAULNIER: You told me I had
something coming from the previous --

CHAIRPERSON LLOYD: You have many more coming.

Maybe what would the staff -- what would that do? What
are the implications of basically Supervisor DeSaulnier's
suggestion?

EXECUTIVE DIRECTOR KENNY: I think it's a timing
issue. I mean, I think what we'd have to do is
essentially if there was an option there on the $15
million, the question would be at what point would you, sort of, pull the option, because the difficulty is going to be is that, again, we only have roughly 190 buses in that particular category. And, again, we're looking at over 20,000 school buses in the state.

So I think the likely outcome is that all 190 buses are going to be claimed, and so I don't think there's going to be any money left for retrofits.

So the question becomes one really of timing. If you say that they can basically jump into the retrofit pot immediately, then someone may, in which case you reduce the number of buses. But if you say they have to wait X number of weeks or months, I think there won't be any money for retrofits. I think the money will all go to school buses.

BOARD MEMBER DeSAULNIER: Then if you give it --

BOARD MEMBER BURKE: But that's an assumption not necessarily based on fact, but in theory. So, if, in fact, you did that and your theory was right, there wouldn't be any change in what you did at all, but at least he got the option to give flexibility. She got her school board flexibility and those people who are looking for more retrofit thought at least they had a shot even though they didn't get it.

EXECUTIVE DIRECTOR KENNY: Yeah, I'm not
disagreeing. I'm just saying that I think it would be
important to identify the timing, essentially, either it's
like on day one or basically it's on day 30, at which
point, you know, the people have the option to go into the
retrofits.

BOARD MEMBER DeSAULNIER: In the keeping of the
spirit how about day 15? I don't know what the right time
is but the idea of giving some motivation for people to
look at retrofit but a very limited period of time, I'd
leave that up to staff.

CHAIRPERSON LLOYD: All right. Mr. McKinnon.

BOARD MEMBER McKINNON: Yeah. I guess I started
out at use all 50 million for retrofit and fix 24,000
buses, I mean --

BOARD MEMBER DeSAULNIER: That's more than

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(1)
tinkering.

(Laughter.)

BOARD MEMBER McKINNON: I mean, that's where I
started. And actually what I've arrived at is kind of
living with the proposal as it is. It has merits in all
the directions. While I listened to people feeling that
we weren't doing enough for natural gas, half the money
goes to natural gas, 25 million. We were offending this
industry by giving them $25 million. Hello.

(Laughter.)
BOARD MEMBER McKINNON: And I think moving forward with new diesel buses that are cleaner is a good thing to do and making sure that there's money there to do that.

And yeah, there's a debate over 3.0 and 2.5. I think we're going to end up with competition for International. I mean, who is going to avoid the opportunity to sell buses and engines? I mean, it's going to happen. And I think it helps with cleaning up diesel. So that's a very long winded way to say I have no objection to the mix. Probably the only place I would tinker has to do with the school match stuff.

CHAIRPERSON LLOYD: Are there any other issues on the trap before we go on to the match.

BOARD MEMBER CALHOUN: Try to get some traps included in this whole package. I hate to see all of this completely for new buses.

BOARD MEMBER BURKE: It's at 10 million so far.

CHAIRPERSON LLOYD: Dr. Burke.

BOARD MEMBER BURKE: I'm not going to tell about my walk to school in the snow. And let me tell when it was really cold and it was over my head.

BOARD MEMBER DeSAULNIER: Please, because I used up my hankey about two hours ago.

(Laughter.)
BOARD MEMBER BURKE: And it was uphill both ways.
I agree. The three of you, and Matt started me
out going that way when he said hey man, I'm not into any
of this stuff, let's retrofit all these buses and get it
all done now. So he started me out going that way. Now,
he's turned out and he's behind me now.

So thanks.
(Laughter.)

BOARD MEMBER DeSAULNIER: Where do you prefer
him?
(Laughter.)

BOARD MEMBER BURKE: I want him in front of me,
thank you very much.
(Laughter.)

BOARD MEMBER BURKE: But I don't see anything
wrong with your proposal, because it's basically the staff
proposal. And if what Mike says is true, which I
absolutely think it probably is unequivocally true, by
tomorrow afternoon 12:00 o'clock, but at least we've given
the opportunity to have retrofit sneak in a few extra
dollars.

Now, I don't in my heart of hearts, I don't
believe it's going to happen. But it also gives her her
flexibility for the school districts to make the decision
whether they want new buses or retrofitted buses. It
gives retrofit a shot at more money. And I want to thank Mike very much and the rest of the staff from keeping this from the air quality districts, because we don't stay this late at work.

CHAIRPERSON LLOYD: I think staff obviously have some consultation about that.

Professor Friedman.

BOARD MEMBER HUGH FRIEDMAN: I'm not sure of the implications. I don't know if staff is still considering them, but I'm all for flexibility, although I thought I heard the Supervisor say that she liked the proposal because it was flexible.

BOARD MEMBER RIORDAN: I do.

BOARD MEMBER HUGH FRIEDMAN: And she wasn't seeking more flexibility.

BOARD MEMBER RIORDAN: Right, I do. If I miscommunicated that --

BOARD MEMBER HUGH FRIEDMAN: I would like to know more about how that works? I mean, at what point do school districts have to, with their boards and their consultants and their transportation committees make this election, and how do they do that meaningfully, and does that mean that pre-77 buses can -- can they all be retrofitted efficiently. I'm not clear that that's the case.
And so is that a viable option? And how long do we give for that? You know, we can chew this thing to death. And if it's going to make a marked improvement, I'm all for it, but I would hope to get a little more guidance for how that works.

CHAIRPERSON LLOYD: It seems to me that it's so complicated that we should refer it to the local boards of supervisors to sort it out.

(Laughter.)

BOARD MEMBER HUGH FRIEDMAN: Actually, I wish we had done what Mr. Burke mentioned --

BOARD MEMBER DeSAULNIER: Thank you. You've just made four good friends.

BOARD MEMBER HUGH FRIEDMAN: -- and just sent it all to the regional boards.

BOARD MEMBER BURKE: Made all the sense in the world.

CHAIRPERSON LLOYD: Seriously, I think Professor Friedman, maybe staff has a comment, reflecting on the suggestion.

EXECUTIVE DIRECTOR KENNY: Actually, we have been trying to figure out how to do it. The difficulty we have is that we have different administering sources for the different funds. And essentially what is happening is the new bus funds are being fundamentally administered by the
CEC. That retrofit funds are being administered by us, and so we have to figure out a mechanism by which once the new bus funds are out there, within some specified period of time, the school districts make their determination and either go a new bus route or they go a retrofit route.

If they then go a retrofit route, then there would be some kind of a transfer of the money out of the new bus funds into the retrofit fund. And I mean that's where we are having our difficulties.

BOARD MEMBER DeSAULNIER: Mr. Chairman, I didn't mean to make things more complicated. And, Ron, if you want to start. My suggestion would be if there's a way to do it cleanly, I'd leave that up to the Executive Director, how's's that?

EXECUTIVE DIRECTOR KENNY: No thanks.

BOARD MEMBER RIORDAN: I want to make it very clear for the record, I am supporting what the staff has proposed, because I think there is built into that flexibility, and yet you keep sort of the pot sort of separate and then adjust hopefully with another round of funding next year, that is my position.

CHAIRPERSON LLOYD: Supervisor Roberts.

BOARD MEMBER ROBERTS: Yeah, let me try one last effort here. And I'm going to take you back to air quality. You know, while I certainly didn't mean to -- in
my observation of the school districts' motivations to want to have more buses, I understand that. You know, there's nothing wrong with that. But I thought that our charge here was maybe from a little different perspective.

If I understand this right, a retrofit is somewhere between $4,000 to $6,000. Let me for the moment assume it's $6,000. Assume it's $4,000 roughly, or $5,000. We'll take the midpoint.

If you took $15 million, it comes down to buying 150 buses or retrofitting 3,000 buses, and if you're looking at it from an air quality standpoint, I've got to tell you, we've got this upside down. Now, you may feel comfortable with that, but buying 150 buses from an air quality standpoint is not going to be measurable in the State, okay.

So I'm just telling you what's making me very uncomfortable, and whether you want to tinker or don't tinker, I think you're off the beaten path and I think you're having only a marginal impact on air quality issues that you could greatly impact by looking at this somewhat differently.

And I will not say a thing and I'll be prepared to vote on whatever you want to put forward.

CHAIRPERSON LLOYD: Professor Friedman.

BOARD MEMBER HUGH FRIEDMAN: I'd like to talk
about one other issue, before I get too tired to talk
about anything, and that is the issue of the match and the
funding. I mean if there's any more conversation on the
allocation, I didn't want to preclude it, but I don't want
people to feel that they have to keep doing it if they
don't want to chew it. Is there any more conversation?

CHAIRPERSON LLOYD: I think there is, obviously.

BOARD MEMBER HUGH FRIEDMAN: I mean, are we
trying to develop some kind of consensus or are we going
to have motions to amend or approve or accept.

CHAIRPERSON LLOYD: I just want to respond to
Supervisor Roberts. I certainly wouldn't advocate going
all retrofits. I think the balance we have is important.

BOARD MEMBER BURKE: Instead of taking 10 million
he said 15 million for retrofit, and then leave 10 million

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Mr. Chairman, I was told
that I wasn't close enough to my mike and there were
people that couldn't hear. Could I repeat what I said.

CHAIRPERSON LLOYD: I think I understand.

BOARD MEMBER ROBERTS: What I said is if you -- I
wanted to change the balance. But I'm looking at 15
million, you can take whatever part of the 25 million you
want, but I'm looking at simply the impacts from an air
quality standpoint. And I said if you took 15 million and
to simplify this you say you were buying buses at a
100,000 apiece, you're going to buy 150 buses.
If you did retrofits at 5,000 apiece, you're
going to retrofit 3,000 buses, okay. The difference
between buying 150 buses and retrofitting 3,000 buses from
an air quality standpoint leads me to believe that we,
because of all of the testimony that we've gone through
and the tiredness that we're all feeling, that we're
losing the reason why I think we are here.
It isn't to help school districts supplement
their fleets. And as you can see, we're not -- we're
going to help very few school districts. You'd be lucky,
this is like a lottery, if you get a bus, you're going to
be very -- everybody is imagining they are going to get
some bus or buses, these rural districts, they're going to

be lucky if they get a half a bus at the rate at which
you're spending the money.
And the impact on the air quality in California
is going to be immeasurable, you are not going to measure
it, forget it. So I'm saying why don't we do it in a
different split. And not that we ignore -- we'll have
some money for those new buses, but I think that on the
diesel side, we should weigh in heavily on the retrofits.

BOARD MEMBER HUGH FRIEDMAN: And what about, I
know it's not air pollution, but what about safety? By
doing that and urging retrofits, we may be improving the air but we're locking in the buses that are noncompliant with federal safety standards since 1977 or before. And, as I said earlier, I wish there were a perfect solution. And maybe there's a better balance, but I don't feel that I've got the -- I really don't feel I've got the wisdom to pluck it out of the air at 8:00 o'clock after a long day.

CHAIRPERSON LLOYD: Why don't we take the simple approach of taking that, splitting that 25 million into 12 and a half apiece. It doesn't get to where you're going, it's a step in that direction, what does staff think are the implications of that?

EXECUTIVE DIRECTOR KENNY: We would actually have more money then for the retrofits and roughly we were looking at $10 million as being sufficient to provide for roughly 1,500 retrofits. And so the additional two and a half million dollars, we would increase that by essentially about 375 retrofits. The number of school buses would be decreased on the diesel side by essentially 25.

CHAIRPERSON LLOYD: Supervisor DeSaulnier.

BOARD MEMBER DeSAULNIER: I understand where Ron's going and I appreciate his passion and the investment. So if 1250 is agreeable to everybody, I'd be
supportive of that.

CHAIRPERSON LLOYD: That said, this time of night, that seems a good number.

Now, then I think the question came up on the match. We need to talk about that and the allocation of buses.

BOARD MEMBER HUGH FRIEDMAN: What would be the implications of changing from 25 percent to something less, 20 percent, you know, we always buy things at 10 percent down and 20 percent down.

EXECUTIVE DIRECTOR KENNY: We were looking at essentially roughly every five percent would make a difference of 20 buses. And so right now we're at a 25 percent match which totals 100 buses. If it drops to a 20 percent match, we would be down to -- essentially we would lose 20 buses, so we'd have only an additional 80 buses in terms of the match procurement.

If we dropped to 15 percent, then what we'd do is we'd lose 40 buses and down the line. If we dropped to 10 percent, we'd lose 60 buses.

BOARD MEMBER HUGH FRIEDMAN: And About every ten percent is about -- or every five percent is about $5,000 to $7,000?

EXECUTIVE DIRECTOR KENNY: No, I was looking at basically essentially from a more aggregate standpoint,
which was that the 25 percent gave us roughly an additional 100 buses where we are right now.

BOARD MEMBER HUGH FRIEDMAN: Well, but if an average bus is $100,000 to $130,000 and we're asking them to come up -- am I wrong?

EXECUTIVE DIRECTOR KENNY: No, you're correct.

BOARD MEMBER HUGH FRIEDMAN: They come up with five percent of that, then that's 5,000 to 7,000.

EXECUTIVE DIRECTOR KENNY: That's correct.

BOARD MEMBER HUGH FRIEDMAN: And so ten percent would be 10,000 to 13,000.

EXECUTIVE DIRECTOR KENNY: That's correct with the cap being at 25.

BOARD MEMBER HUGH FRIEDMAN: And to the extent that they're going to -- the have the opportunity to sell those buses or trade them for something, if there's somewhere in this State a more polluting bus, is that a way to raise some funds toward the match for the better bus?

EXECUTIVE DIRECTOR KENNY: Well, the difficulty there would be if they sold the bus and we were going to use it toward the match, we'd have to figure out some way of tracking that in terms of actually counting and I think that would be very difficult to figure out, especially as we're talking about rolling buses down before we
ultimately get to one that's crushed.

BOARD MEMBER HUGH FRIEDMAN: We do make sure that we trace it, so that for every bus that is purchased under this program, there is a colder more-emitting bus that is out of action permanently?

EXECUTIVE DIRECTOR KENNY: Yeah, we do want to see that.

BOARD MEMBER HUGH FRIEDMAN: I'm just wondering how we might accommodate the concern, especially in some of the poorer districts.

CHAIRPERSON LLOYD: I think I would echo that. And clearly from what we heard earlier, I think it's the Governor's concern about providing those buses, and, at least, giving those districts the opportunity to participate in the program and they shouldn't be doing it for lack of funds. Can we have a hardship provision or something in there?

EXECUTIVE DIRECTOR KENNY: We can. In terms of determining what a hardship would be.

BOARD MEMBER BURKE: Mr. Chairman, I'm confused.

Now if we go with $12,500,000 for new bus purchase.

BOARD MEMBER HUGH FRIEDMAN: Plus 25 for the CNG.

BOARD MEMBER BURKE: Well, no, but if we go for 12,500 for the new Green Diesel buses and we move the co-pay, for lack of a better term, to 10,000, how many
buses are we talking about now?

EXECUTIVE DIRECTOR KENNY: That translated roughly to 60 buses.

BOARD MEMBER BURKE: I mean, we're not doing anything here. I mean, you know, I've stayed all day. I could have stayed at work and maybe bought 60 buses.

(Laughter.)

EXECUTIVE DIRECTOR KENNY: Dr. Burke, just to make sure I was clear --

BOARD MEMBER BURKE: I'm talking about this 12 and a half million dollars that's been --

BOARD MEMBER RIORDAN: You have to add it to the other part of the equation.

BOARD MEMBER BURKE: Okay. So let me add it to the other part of the equation.

BOARD MEMBER HUGH FRIEDMAN: I'm not suggesting that we across the Board cut the match. The match, I think, is a good idea to leverage and expand the program. But there are districts that may have hardship. I don't know how to define that. We've been struggling a little bit with that. I heard several of our colleagues. And I'm just wondering before we -- if there is some way we can accommodate need.

EXECUTIVE DIRECTOR KENNY: I think what we were looking at, though, is if you look at the CNG That The CNG
That roughly 208 buses, is what we thought the $25 million would buy us. If you're looking at 12 and a half million dollars on the diesel side for the new buses, that's going to buy us roughly 167 buses, approximately.

And so what we're talking about is a total there, and this is assuming a 25 percent match, is roughly 375 buses. And so as you reduce the match for hardship purposes, for example, on the pre-77s as Mr. McKinnon suggested, if you drop it down to say a 20 percent requirement, that 20 percent reduction would cost 20 buses. Excuse me that five percent reduction would cost 20 buses. So we would drop from 375 down to roughly 355.

And each time --

BOARD MEMBER HUGH FRIEDMAN: That's assuming you did that across the Board?

EXECUTIVE DIRECTOR KENNY: Assuming maximum -- and that's assuming a maximum use of that money for those buses.

CHAIRPERSON LLOYD: But that also assumes that supposing Dr. Burke decides that he's got money there and he can support buses in his district to make up that five, so the numbers may not change.

EXECUTIVE DIRECTOR KENNY: You're absolutely correct. I'm giving the most conservative possible outcome here.
BOARD MEMBER RIORDAN: But those who are in, say, the larger air pollution control districts have more money flowing to them with other, you know, means by which they can fund this. Little, you know, air pollution control districts have zero, almost zero, of those discretionary monies, because they don't have the, you know, the population to support it.

Do you have to come up with the formula today, but maybe we've come to the point where we've divided the pot, it seems as though there's a consensus. Maybe what we would ask the staff is to think about it. I think it's a very hard difficult decision to come to quickly, but maybe there is a hardship category that we could carve out.

If you really think about it, if you take the --

I'll play the devil's advocate for a moment. For $25,000 for some school district to get a wonderful new bus, that's peanuts, it's just peanuts. I mean it's a mid-sized car. So that is a real -- I hate to disturb -- I hate to disturb that balance. It's our hardship cases that we want to accommodate and maybe there's a way to do that.

EXECUTIVE DIRECTOR KENNY: The one way we were actually thinking about was Mr. McKinnon's a suggestion which is that it's a pre-77 bus, then the match is a lower
match. And what that does is does really two things. It
incentivizes getting rid of the pre-77s to a certain
degree. And then what it also does is that there's an
assumption that a poorer school district would have more
pre-77s and so we would be helping the poorer districts by
reducing the match associated with them.

My question would be, you know, how much of a
reduction in the match should there be if you accept both
those assumptions.

BOARD MEMBER RIORDAN: I think those pre-77s are
all going to come out.

BOARD MEMBER McKINNON: I floated ten percent
earlier and maybe that was a little extreme. So why don't
I float 15. I think I can't think of a simple way to
formulate this. I mean we're going to hand the Energy

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Commission this money, lucky them.

(Laughter.)

BOARD MEMBER McKINNON: So I guess what I would
propose is 15 percent instead of 25 percent, if it's a
pre-77 bus.

BOARD MEMBER BURKE: What about this, Mr.
McKinnon. Say we put 20 million in retrofit and put five
million and give buses away to hardship districts?

CHAIRPERSON LLOYD: That would come back to the
same question, how do you define hardship?
BOARD MEMBER BURKE: How are you going to on pre-1977?

BOARD MEMBER MCKINNON: Yeah, I'll tell you the mix between new diesel and CNG That significantly with what I thought we did come to consensus at. If we're going to fiddle with that some more, then I don't think we want to do that.

BOARD MEMBER BURKE: How did it change, I missed that?

BOARD MEMBER MCKINNON: We did the 12,5, 12,5 right?

BOARD MEMBER BURKE: But that's for diesel retrofit?

BOARD MEMBER MCKINNON: It's diesel retrofit and new diesel, the mix. So if we increase retrofit to 20,

it's got to come from somewhere.

BOARD MEMBER BURKE: Well, it was coming from that other 12,5.

(Laughter.)

BOARD MEMBER MCKINNON: You don't want to replace pre-1977 buses with retrofit. We want to replace the buses.

BOARD MEMBER BURKE: That's what I said. Take a pool of money, whatever the number, and wherever we take it, and I was just kidding when I said take it -- I wasn't
kidding.

(Laughter.)

BOARD MEMBER BURKE: But, you know, if you took a pool of money and said, hey, you know, we got a lot of agricultural, rural areas which are in desperate need, have small populations, it's just like Ms. Riordan said, they have a small population-base. The large districts have more access to money, no question about that. But we have larger problems most of the time and that's why we have it.

But say you took a pot of money, say $5 million, and you said okay, in those rural areas the max is going to be a thousand dollars or ten thousand or five thousand or whatever, whatever number you pick. Then you're really making a significant difference to a rural school district, because they can really afford that.

And in the areas where they have the worst air conditions, then a retrofit and you get a maximum bus impact in those areas. And I'm willing to reopen the CNG That

BOARD MEMBER DeSAULNIER: Please, God, no.

(Laughter.)

BOARD MEMBER McKINNON: Here we go. I'm looking at some of the school districts that are a hundred percent pre-77, and the Grossmont School District that's fairly
urban anymore.

BOARD MEMBER BURKE: We've got some right in the South Coast.

BOARD MEMBER McKINNON: Del Mar.

Anyway.

BOARD MEMBER BURKE: That's not poor now. We're talking about poor.

BOARD MEMBER McKINNON: I would argue that we reached a consensus on the mix and, you know, I don't know if I want to reopen that.

CHAIRPERSON LLOYD: I like the idea that maybe someone mentioned earlier that is it possible that as I say we quit when the going is good here and ask staff maybe to take a month there to look at this whole issue of match and how we address the hardship cases? Would that make any sense?

EXECUTIVE DIRECTOR KENNY: We can do that or we could essentially take the other suggestion that was put forward of reducing the match on the pre-77s with the assumption being that we'd probably end up addressing the hardship cases by implication.

CHAIRPERSON LLOYD: But that's reducing, not eliminating.

EXECUTIVE DIRECTOR KENNY: Exactly. Right now, we're at a 25 percent match. What I was hearing was
essentially a reduction in that match down to 15 percent
and it's a pre-77 bus. Then what ends up happening
essentially, is that a rural district that's replacing
that bus is essentially going to buy a new bus for roughly
$15,000.

BOARD MEMBER HUGH FRIEDMAN: The only problem
I've got with that, Mr. Kenny, is according to this, the
Grossmont Union High School District, I assume that's down
in Mount Helix, Grossmont, that's a fairly affluent area,
it's somewhat mixed, in southern California, near San
Diego, if that's the one that I'm familiar with, it's got
82.61 percent pre-77 in that school district. Out of 23
school buses, 82.61 percent are pre-77.

And I would like to think that through a few bake
sales and so forth, they could raise enough money to make

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some matches. I know a lot of people that live in that
district.

EXECUTIVE DIRECTOR KENNY: One other suggestion
that the Board could consider is essentially a reduction
in the match to 15 percent in a situation where it's a
pre-77 bus and the CEC who is administering the
distribution of the new bus money makes the determination
that, in fact, the school district does have a hardship of
some type and we identify that as essentially --

BOARD MEMBER RIORDAN: That's a great idea, Mr.
EXECUTIVE DIRECTOR KENNY: I'm just trying to move us along. And we could provide that direction from the Board to the CEC.

CHAIRPERSON LLOYD: Can you use those words again?

EXECUTIVE DIRECTOR KENNY: Well, what I would suggest is that we go with the pre-77 reduction in the match down to 15 percent and the additional requirement that the school district, for example, be below the 50 percentile line in determining of maybe the dollars available per capita or something like that.

I don't know the exact language, but the key direction by the Board, which I'm suggesting, would be that we are looking at the poorer school districts and we could identify that in some dollar fashion.

CHAIRPERSON LLOYD: Yes. And that we would work with the CEC. That that?

EXECUTIVE DIRECTOR KENNY: We would just simply give CEV that direction that that's the way that this Board has asked them to distribute the money for the new buses.

CHAIRPERSON LLOYD: And then would we -- let them do it, but it would be nice also to have ARB staff also
agree to that.

EXECUTIVE DIRECTOR KENNY: That would be fine.

CHAIRPERSON LLOYD: Say when CEC That up That

that, ARB is involved -- staff is involved with that
decision as well.

EXECUTIVE DIRECTOR KENNY: What we could do, if
the Board wishes, is that we could essentially sit down
with the CEC That That out some kind of a calculation
methodology which does reflect what the poor 50 percent of
the school districts in the state are so that we have
identified them and those are the ones that get the
 reduction in the match.

BOARD MEMBER RIORDAN: And I think your school
people that have been here today can give you it, because
I did hear a couple of suggestions that I thought would

work, but because of the constraints of time, you can't
really explore them. But I'll bet there's a little bit of
a system that gives you some guidelines for determining
which district might have a quote "hardship" case.

EXECUTIVE DIRECTOR KENNY: I think you're correct
and I don't think this would be very hard to identify.

CHAIRPERSON LLOYD: And I think many of the
school districts are back there, and I see Steve still
there. So I think they can hear that, so good suggestion.

So I think is that -- so the form, as you know, we have a
resolution before us.

BOARD MEMBER D'ADAMO: Another issue.

I thought you were just on the match issues.

That should be easy to dispose of. I think that we ought to include in the resolution some statement of need for the future, and I don't know how we assess that. There's been a lot of testimony, a hundred million next year. Maybe it should go five years. I think we need to go beyond just conjecture and have something based upon any data that's been collected, so that it can be utilized by whoever in the coming months.

BOARD MEMBER DeSAULNIER: Maybe the Legislation can be written to give this Board less discretion.

(Laughter.)

BOARD MEMBER RIORDAN: You may regret that.

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BOARD MEMBER HUGH FRIEDMAN: Well, as we all know, the Administration is in the process of not only dealing with energy issues statewide, but with beginning to develop a budget. And I think the sooner we could begin whatever process we want to initiate or get our licks in, in terms of a follow-on appropriation for and ensuring next year's purchases and retrofits and the like. And yeah we ought to urge the Legislature to see if they can do it this time.

CHAIRPERSON LLOYD: Well, maybe a hundred million
is a good round number.

BOARD MEMBER McKINNON: For next year.

BOARD MEMBER D'ADAMO: But I was really hoping that it would be based upon some information, and hopefully the staff knows what the need would be, how much would it cost, how long would it take?

BOARD MEMBER HUGH FRIEDMAN: You've got to have a rationale. For example, what would it take to get rid of all pre-77 buses that don't meet safety standards, that are the most polluting, and giving effect to what hopefully will occur under this existing appropriation?

That might be one way to quantify it.

EXECUTIVE DIRECTOR KENNY: We can put that together.

CHAIRPERSON LLOYD: So we would include that in the resolution, yes. And I guess the number to come up with later.

Yes.

BOARD MEMBER McKINNON: I want to say the obvious. I thank God I didn't have to work on this for the last year. And I want to say thank you to the staff that had to do this balancing act. And I'm sure everybody feels this way, but thanks.

CHAIRPERSON LLOYD: I certainly would echo that.
here and I think it's tremendous when we hear people
coming up today to congratulate the staff for all the hard
work you've put in.
And we understand also very well what you put
together here.
So I think we have a resolution. I think we've
got the ingredients and hopefully you've got the
ingredients there of the fuel split. Then we've got on
the diesel side, we've got 12 and a half million for
traps, 12 and a half million for new green diesel. And
then we're talking about the match is going to come back
to CEC That then the resolution including the
recommendation for continued funding.
BOARD MEMBER BURKE: So moved.
BOARD MEMBER RIORDAN: Second.

CHAIRPERSON LLOYD: All in favor say aye?
(Ayes.)
CHAIRPERSON LLOYD: Nay?
(Nayes.)
CHAIRPERSON LLOYD: Well, thank you very much
indeed. It's been a very long day. I appreciate staff
all you've done and stayed together.
Just a reminder before we adjourn this meeting.
BOARD MEMBER RIORDAN: We start at 8:30, Mr.
Chairman.
CHAIRPERSON LLOYD: I'd like to adjourn the meeting until 8:30 in the morning, so 8:30, bright and early.

Thank you all very much. The Board meeting is officially adjourned until 8:30 in the morning.

(Thereupon the Air Resourced Board meeting was adjourned at 8:30 p.m.)

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CERTIFICATE OF REPORTER

I, JAMES F. PETERS, a Certified Shorthand Reporter of the State of California, and Registered Professional Reporter, do hereby certify:

That I am a disinterested person herein; that the foregoing Air Resources Board meeting was reported in shorthand by me, James F. Peters, a Certified Shorthand Reporter of the State of California, and thereafter transcribed into typewriting.

I further certify that I am not of counsel or
attorney for any of the parties to said meeting nor in any way interested in the outcome of said meeting.

IN WITNESS WHEREOF, I have hereunto set my hand this 29th day of December, 2000.

JAMES F. PETERS, CSR, RPR
Certified Shorthand Reporter
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