

JOINT AGENCY STAFF WORKSHOP
OF THE
CALIFORNIA ENERGY COMMISSION
CALIFORNIA AIR RESOURCES BOARD

In the Matter of:)

Informational Proceeding and)
Preparation of the State Plan to)
Increase the Use of Alternative)
Transportation Fuels)

) Docket No.
) 06-AFP-1

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ORIGINAL

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Peter Petty
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CALIFORNIA ENERGY COMMISSION

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Tim Olson

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Diana Schwyzer

Mike McCormack

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CALIFORNIA AIR RESOURCES BOARD

Robert D. Fletcher, Division Chief

ALSO PRESENT

Tom Fulks
Diesel Technology Forum

Silvia Williams (via teleconference)
Shell

Paul Wuebben
South Coast Air Quality Management District

Gina Grey (via teleconference)
Western States Petroleum Association

Randal A. Friedman
Navy Region Southwest

Michael L. Eaves
California Natural Gas Vehicle Coalition

ALSO PRESENT

David L. Modisette
California Electric Transportation Coalition

Todd Campbell, Mayor
City of Burbank
Clean Energy

Kate Horner
Bluewater Network Division
Friends of the Earth

Tim Carmichael
Coalition for Clean Air

Mark P. Sweeney
Energy and Utility Consulting
California Natural Gas Vehicle Coalition

John Alvarez (via teleconference)
Chevron

Bonnie Holmes Gen
American Lung Association

Garrett Stone (via teleconference)
Aspire Corporation

Jamie Knapp
J. Knapp Communications

Mary Beth Stanek (via teleconference)
General Motors

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P R O C E E D I N G S

1:02 p.m.

MS. SHAPIRO: Good afternoon. I'm Rosella Shapiro. I'd like to welcome you all to the Energy Commission and to this staff workshop on the state's alternative plan for transportation fuels.

I hope that you have all had a chance to look at the plan. We're going to go over it. We didn't expect anybody to have read it and digested it all. This is our introduction, to you stakeholders, of the plan.

As many of you know, we have been working feverishly to develop this plan and get it out to you so that we would have a chance for discussion before the Commission adopts it.

I want to let everyone know now that the time for comments, on this plan, to staff, is the end of this week, Friday. The Commissioners are not going to consider it tomorrow at the business meeting even though it was noticed. It is going to be put off to a special business meeting at the end of the month on October 31st.

We hope not to have to republish the plan, but just to do errata and maybe some fairly,

1 you know, paragraphs of errata, but not to have to
2 republish the plan again.

3 So, Mr. Fletcher, would you like to say
4 anything, other than welcoming people here?

5 MR. FLETCHER: No.

6 MS. SHAPIRO: Good. This is a joint ARB
7 and CEC Staff workshop on the plan.

8 So, with that, I will turn it over to
9 Mr. Olson.

10 MR. OLSON: Okay, thank you, Rosella.

11 MS. SHAPIRO: You're welcome.

12 MR. OLSON: So, we have a setup here
13 where we're webcasting this simultaneously; we
14 have people that are listening in on the phone and
15 can see the presentation materials.

16 And the plan today is to go through a
17 short presentation and then basically open this up
18 for comments, questions, clarifications, insights,
19 anything on your mind that you have a problem with
20 or you want to support or reinforce, or whatever
21 comment you have.

22 So, we also -- I'm going to do a short
23 presentation, but we also have lots of backup
24 slides, depending on questions you may have about
25 the content of the overall plan, and some of the

1 backup material that went into this. So we have
2 capability to go into a lot more detail depending
3 on whether --

4 MS. SHAPIRO: Tim, could you turn down
5 the lights so that people could see the screen
6 more easily. Thank you.

7 MR. OLSON: Okay, so, also want to keep
8 a note that if you have a -- we want this as an
9 open workshop. We want to -- if you have
10 questions or comments, the best way to be first in
11 line on that is to fill out one of these blue
12 cards that's out on the front table.

13 But we will take comments on the phone,
14 and then if anybody wants to raise their hand,
15 they can -- we'll answer questions as they raise
16 their hand.

17 So, this report was made available,
18 published October 1, 2007. It's on our website.
19 And as Rosella said, we're going through some
20 modifications, possible modifications from this
21 workshop; and then another mini-workshop planned
22 on October 24th.

23 To refresh your memory a little bit why
24 we did this, why we're producing this report,
25 preparing it for the Legislature and the Governor.

1 It goes back to 2001, 2003 when petroleum
2 reduction goal, the AB-2076 report, in which the
3 Air Resources Board and Energy Commission
4 established these petroleum reduction goals.

5 I'm not going to go through the details
6 of this, but to remember that these were pretty
7 challenging goals back in 2003.

8 The AB-1007 legislation was, in essence,
9 created to address how do you meet those goals
10 from the AB-2076 report. And we looked at it as
11 there are multiple options and you'll see, as we
12 go through this, the different ways that we think
13 you could achieve these goals.

14 In addition, what we found in the same
15 timeframe of the AB-1007, other state policy goals
16 crept into the decisionmaking and are directly
17 related to this. One of them has to do with the
18 Bioenergy Action Plan goals that are listed here
19 on this page. And then in addition there are a
20 series of greenhouse gas emission reduction
21 activities, legislation and executive orders. The
22 Pavley greenhouse gas emission standards; the
23 California Global Warming Solutions Act; and the
24 low carbon fuel standard. Each one of these
25 things has an objective that we're trying to

1 address in this report.

2 So, what are the requirements of the
3 plan. Well, the main one is that we developed
4 this plan to increase alternative fuel use in
5 California. But we do it in a fashion that was
6 raised for the first time in this legislation, to
7 do it on an entire environmental footprint
8 standpoint. Meaning full fuel cycle, what we call
9 the full fuel cycle analysis, greenhouse gas
10 emissions, criteria pollutants, toxics, multimedia
11 environmental impacts.

12 And that, if you remember, that analysis
13 was conducted from around December 2006, and it
14 still goes on today. But we produced a full fuel
15 cycle analysis report; and came to conclusions
16 about the kind of relative environmental footprint
17 of several fuels, alternative fuels compared to
18 petroleum and diesel. And that report is on our
19 website. We're not going to go into a lot of
20 detail today about that. But that's something
21 that is a key thing.

22 Key point in that legislation, AB-1007,
23 no net material increase in the air pollution,
24 water pollution, damage to human health. And that
25 you'll find in our plan that we held to that

1 requirement, and it's reflected in the results.

2 The legislation required us to establish
3 goals to increase alternative fuels in the years
4 2012, 2017 and 2022. The Energy Commission and
5 the Air Resources Board, for the purposes of this
6 analysis and looking kind of the longer term,
7 decided to include 2030 to 2050 in that analytical
8 work, even though we're only asked to establish
9 goals up to 2022.

10 And a key part of this legislation is
11 all of these options need to be optimized for the
12 environmental and health benefits, again referring
13 back to the full fuel cycle analysis as the method
14 to try to cover that.

15 There were a series of economic things
16 that we're asked to do in this report: minimize
17 economic costs to the state; maximize economic
18 benefits of instate fuel production. And to do
19 all this work in a fashion that addresses barriers
20 we know are out there that are impeding the
21 alternative fuel development.

22 The report asked for, in conclusion, to
23 recommend policies that insure that the
24 alternative fuel goals are met. Either standards,
25 regulations, incentives, other program activities.

1 And you see that in the report.

2 So, what have we done so far on this?
3 What are the things we've completed in this now, I
4 guess, 18-month-long effort?

5 Well, we've completed, like I mentioned
6 before, the full fuel cycle analysis. The
7 methodology, if you remember, we created a -- took
8 a public domain model, the GREET model; modified
9 it for California conditions; and then conducted
10 94 fuel pathway studies out of maybe 1000
11 potential pathways. And we selected 94 feeling
12 that they offered the best depiction of what
13 plausible options in California.

14 This analysis was used, is the key
15 methodology for the low carbon fuel standard. The
16 analysis that the UC Davis and UC Berkeley Staff
17 went through to help the Air Resources Board, and
18 we're finding out that this is likely to be used
19 as the methodology for the development of the
20 actual regulations.

21 We think that again this has advanced
22 the state of the art of that kind of analysis.
23 Our feeling here at the Energy Commission is this
24 will be the norm from this point forward, using
25 that full fuel cycle approach.

1 We also did a lot of peer review and
2 vetting of this model and the inputs and the
3 assumptions. And that's also a standard thing
4 that we want to engage and embody in all future
5 work, is that transparent process of any
6 analytical work.

7 The major thing we did on developing the
8 plan is we conducted, I think, over 57 different
9 meetings with either individual meetings or group
10 meetings with lots of different people. And
11 developed a kind of a side-by-side comparison of
12 how each alternative fuel could enter the
13 marketplace and increase market penetration.

14 We used three different growth
15 scenarios. A very conservative, almost business-
16 as-usual approach; a moderate growth rate that had
17 several assumptions; and a more aggressive version
18 of that moderate growth rate.

19 And in the course of our work we felt
20 that the moderate growth rate was a more plausible
21 approach to take. It requires -- some of the
22 assumptions are sustained high petroleum prices,
23 gasoline and diesel prices, over time.

24 An expectation that government will
25 provide incentives to support the development of

1 alternatives in the near term years where they're
2 not completely cost effective. And then phase
3 that out over into the future.

4 There are several other assumptions. If
5 you want to know more about that we can go through
6 that in more detail.

7 So what we had was ten different kind of
8 analytical things, as if they're operating in the
9 marketplace by themselves with no competition.

10 And then we took that analysis and
11 formed these kind of mixes of fuels of what was
12 plausible, and using that moderate growth rate as
13 the assumption on all fuels. And that's what you
14 see in the report, is kind of a grouping of fuel
15 mixes to meet the goals that we talked about
16 earlier.

17 You'll see that there's reference to
18 instate fuel production, primarily biofuels.
19 That's what we focused on in our report. You'll
20 see that we made some conclusions about
21 limitations. What we've assumed is, in terms of
22 instate biofuel production, most likely sources
23 are going to be waste stream, forest product
24 waste, agricultural waste, urban waste and also
25 sugar cane Imperial Valley, and some dependence on

1 row crop products.

2 But we also felt that because of
3 possible environmental concerns and water
4 availability that there might be a limit for
5 instate production. And you'll see that in the
6 report, that there's some estimation of how much
7 actually can be produced with these constraints.

8 We also went through a process in these
9 meetings with many of you to describe, help us
10 characterize what the conditions, circumstance and
11 actions needed in the marketplace. Trigger points
12 on mass production; economy of scale; cost
13 reductions. What's needed to stimulate automakers
14 to respond to some of the market demand. What
15 kind of roles that individual companies might be
16 playing in the marketplace.

17 And that's described in a series of
18 reports we call the storyline scenarios. They're
19 a companion document to this report. We will have
20 that -- those are on our website. They were
21 produced May 31st for that workshop at that point.
22 We're combining them into a single report here
23 that should be available probably within the next
24 week. But most of it's already in the May 31st
25 document, or series of documents.

1 We also spent a lot of time with you
2 trying to quantify the capital cost of all this
3 development, and to get your help to help us
4 foresee into the future what kind of cost changes
5 will occur as you get -- as market penetration
6 occurs and market share increases.

7 We spent a lot of time on that trying to
8 look at the various stages of the development
9 stream. We also spent a lot of time in looking at
10 what's the total investment required to achieve
11 these goals and individual projects. If you want
12 more detail on that, we can go into that, too.

13 We also quantified and estimated from
14 the fuel mix options that we came up with what you
15 get out of it in terms of greenhouse gas emission
16 reductions and the petroleum reduction potential.

17 So those are the key things that are in
18 this plan, that are reflected in the plan, that
19 are the background analysis.

20 We also -- a key assumption I put on
21 here is we used the USDOE EIA high-price forecast
22 fuel price forecast as our assumption. And then
23 we took a high and low from that. That fuel price
24 forecast from DOE assumes a sustained petroleum
25 and gasoline diesel price increase over time.

1 It's a sustained increase. There's no drop and
2 then back up. It's a sustained increase. It's
3 their high-price forecast. And by the way, it's
4 what DOE uses for a lot of their own analysis on
5 alternative fuels, too.

6 We then took that high price and did a
7 20 percent high and low sensitivity of that. So
8 we have some background if you want to go into
9 that detail.

10 We also completed other companion
11 studies to address the AB-1007 report
12 requirements, survey of fleet managers. We also
13 have included into, as attachments, two UC
14 studies. The technical and policy report that UC
15 Davis/UC Berkeley did, prepared for the Air
16 Resources Board as a reference document for our
17 analysis. They prepared that for their low carbon
18 fuel standard input to the Air Resources Board.

19 Again, economic analysis, and then the
20 recommended actions in the report, as you've seen
21 in the copy.

22 Here are some of the key conclusions;
23 and I tried to summarize most of them. There are
24 several pages of them, but I'm only going to go
25 through what I think are the key ones. There may

1 be others. You may disagree; you may have others
2 you think ought to be on here.

3 So here's what we concluded after all
4 this work. Remember, we have all these goals,
5 it's not just petroleum reduction. Greenhouse gas
6 emissions, instate bioenergy production, petroleum
7 reduction.

8 No single policy action, whether it's in
9 a funding program, regulations, incentive,
10 whatever; no single action can achieve the
11 multiple goals, can help achieve the multiple
12 goals. Need a series of things.

13 I pointed out early the moderate growth
14 of alternative fuels. That's the plausible
15 scenario we picked.

16 And when you look at that moderate
17 scenario that's described in the plan, we will
18 achieve the petroleum reduction goals described in
19 AB-2076. We will achieve the instate bioenergy
20 action plan goals. And we will partially meet the
21 greenhouse gas emission reduction targets.

22 One point of clarification here. There
23 are no specific transportation goals for
24 greenhouse gas emission reductions. It's kind of
25 a proportionate share of the AB-32 and Governor's

1 executive order.

2 So, if transportation is 40 percent of
3 the greenhouse gas emissions in the state,
4 proportionate share would be 40 percent. These
5 action plan that we've come up with only get
6 partial of that. And I think it's estimate maybe
7 two-thirds, maybe about two-thirds of the way in
8 any milestone years.

9 So, that means that other things have to
10 happen besides alternative fuels to meet those
11 greenhouse gas emission goals. What are they?
12 Well, probably some fuel efficiency improvements
13 and VMT reduction. And those are the things that
14 we think will be helpful.

15 Another point here. All the alternative
16 fuels are going to be needed to meet that moderate
17 growth rate scenario or description that we have
18 here, example. And so if someone's saying, well,
19 I don't see enough for my fuel, or still need all
20 of these to meet that moderate growth rate.

21 A couple other conclusions. Across the
22 board need to extend federal incentives that exist
23 today. Some of them are lender's credit, some of
24 them are tax credits, some of them are fuel
25 subsidies. Those things are going to be needed.

1 That's what we heard; that's what our analysis
2 shows, those credits are going to be needed.

3 In addition R&D efforts from the federal
4 government, primarily U.S. Department of Energy.
5 And so that's something that we need to influence
6 from our level here.

7 In addition, we are concluding from this
8 moderate growth plan is that we're going to need,
9 in addition to the federal incentives, state
10 incentives amounting to around \$100 million per
11 year for 15 years. And that's a significant
12 effort, but compared to other investments in the
13 same historically we think is reasonable. We also
14 have a piece of legislation pending that would try
15 to attempt to address this, too, providing that
16 level of funding. Actually more than that.

17 We also concluded from this plan that we
18 see several new industry participants coming into
19 the marketplace. Most noticeably are primarily
20 utilities taking a bigger role in transportation,
21 both municipal and investor-owned utilities.
22 Taking a role not only in their service areas, in
23 the case of investor-owned utilities, their
24 ratepayer type of service areas. But also their
25 shareholder investments and even some of the

1 technology development, the vehicles and other
2 technology. We sense that they're poised to do
3 that.

4 We also have found in our analysis that
5 the alternative fuel mixes that we've identified
6 in our report are cost effective as a group, cost
7 effective are a group as early as 2015 or as late,
8 kind of the late end would be 2030 to 2050
9 timeframe. And we'll go through -- we have some
10 background material on that if you want to go into
11 more detail.

12 We also kind of added up what we think
13 we can get out of these moderate growth scenarios
14 and concluded that -- remember, trying to address
15 the legislation's requirement of established goals
16 for alternative fuel increase, we think we can be
17 in the range of 9 percent of total transportation
18 onroad, light duty, heavy duty and some offroad, 9
19 percent by 2012, 11 percent by 2017, 26 percent in
20 2022. And that's one of the proposals we're going
21 to make to our Commissioners to put forward to the
22 Governor and Legislature.

23 I'm not going to go into the details of
24 the plan unless you ask questions and we can go
25 back and go through all those steps if you want

1 to.

2 I want to give you as much time for your
3 comments. Our plan for the steps in this.
4 October 12th, this Friday, we want comments due.
5 Comments were due yesterday, but we extended that
6 to October 12th.

7 We'll take those comments and do several
8 things for our October 24, 2007 Transportation
9 Committee meeting -- Committee workshop. We will
10 have responses prepared to those comments. And
11 we're not sure what form; that may be a matrix
12 form. It's for insertion into the report
13 modifying, trying to minimize lots of rewriting.
14 But there will be a final Committee report that
15 reflects your comments and our responses to your
16 comments.

17 And then October 31st is the planned
18 special business meeting that Rosella referred to,
19 CEC adoption of AB-1007 alternative fuels plan.
20 The Air Resources Board is considering this. I
21 think because of all the changes they need to look
22 at their dates for what they want to do and in the
23 future. Probably no earlier than November 16th
24 and maybe later, I don't know.

25 And then if you have any comments or

1 questions you can contact me; that is the
2 information here.

3 So, what I'd like to do -- yeah? Susan.

4 MS. BROWN: Well, I have a couple of
5 questions, I think maybe you can address more
6 fully. If you go back one slide, could you
7 explain in a little more detail, Tim, how you
8 arrived at the estimates for the --

9 MS. SHAPIRO: One more.

10 MS. BROWN: -- state incentives that
11 would be needed?

12 MR. OLSON: For the \$100 million per
13 year?

14 MS. BROWN: Yes, please.

15 MR. OLSON: Okay. So here's how we did
16 every alternative fuel category that we looked at.
17 We looked at what's needed -- I'll give you some
18 examples of how we did this in the biofuels area.

19 We looked at the range of the
20 development stream. So we looked at supply; we
21 looked at whether technology investment has to
22 occur. We looked at the vehicles; we looked at
23 the infrastructure, the fueling infrastructure.
24 And then we also looked at it from a consumer
25 response standpoint.

1 And we asked these questions. And any
2 one of those phases; is the marketplace acting
3 well enough on its own where there's progress,
4 what it's cost effective. And if it is, we think
5 that things are moving fine. Then we
6 concentrate -- we only concentrate on the areas
7 that really need some attention.

8 So, in almost every alterative fuel the
9 vehicle differential costs are an area of focus
10 where alternative fuel vehicles are more expensive
11 than gasoline and diesel vehicles, conventional
12 vehicles.

13 So, what's needed to close that cost
14 gap? Is it a fuel subsidy; is it a vehicle
15 buydown; is it a -- so we went through a series of
16 fuel-by-fuel and kind of stage-by-stage for each
17 fuel, what kind of investment is needed to bring
18 the alternative fuels at something close to parity
19 with gasoline and diesel.

20 And then we, based on the feedback from
21 the different stakeholders, different interest
22 groups, we started looking at what are the trigger
23 points to get to those parity -- that parity
24 price.

25 So, for example, on the biofuels, to

1 meet the instate biofuel production goal, and to
2 have a ready source of ethanol for either E-10 or
3 E-85, we looked at how many production plants have
4 to be built. We estimated 30 to 60.

5 We estimated, I forget what the actual
6 cost was, but we looked at 50-million-gallon-a-
7 year, 100-million-gallon-a-year plants. And we
8 looked at whether they are going to be able to do
9 that on their own, or whether an incentive is
10 needed.

11 So we added that up. So went through
12 all these different stages and came up with the
13 numbers. And then we also looked at can't do it
14 all in one year, let's spread it out between now
15 and 2022.

16 That's one of the key assumptions that
17 most of this investment from the state to move
18 alternatives from early adopter into early
19 commercialization or commercial stage. It's got
20 to be done in the next 15 years. the investment
21 has to occur in the next 15 years.

22 The \$100 million is a sum of lots of
23 different -- \$100 million per year is the sum of
24 lots of different things.

25 In the report there's a table, I think

1 it's table 4, that lists all of the -- kind of
2 sums up what that investment is.

3 MS. SHAPIRO: I don't think it's table
4 4, Tim.

5 MS. BROWN: Yeah, table 1, page 20.

6 MR. OLSON: Yeah, table 1. That's a
7 summary. We have lots of detail for each fuel if
8 you're interested in how we arrived at this.

9 MS. BROWN: Thank you, Tim. I have one
10 more question and that relates to the goals that
11 are listed there. Again, my understanding is that
12 those were computed from the use of this moderate
13 case example, which is really a scenario output;
14 but also it's based on much of the inputs you
15 received from various stakeholder groups and
16 what's possible.

17 Maybe you'd like to comment further on
18 how those goals were arrived at?

19 MR. OLSON: Yes. Those were arrived by,
20 you know, going back to the analysis on how much
21 incentives are needed, it also goes back to the
22 number of projects that are needed, and what we
23 thought was plausible, given this combined state
24 and federal incentives, combined with other
25 conditions: high fuel price forecasts, a number of

1 other factors, but those are the key.

2 And if you could have a sustained growth
3 with information that was provided by many of the
4 interest groups, and through our kind of
5 analytical process here, this is what we felt was
6 conservative achievement in the moderate growth
7 rate.

8 This could go higher, we think, but it
9 depends on lots of other factors being in place.

10 I have a blue card from Tom Fulks. Tom,
11 did you want to speak at this point --

12 MR. FULKS: -- public comment period.

13 MR. OLSON: Okay. At this point I'd
14 like to go to some of the public comments. And if
15 you would like to go into details of how we
16 derived some of this information, the cost data,
17 the scenario, the moderate growth case scenario,
18 we can go into that detail. We have backup slides
19 and other things here.

20 But what I'd like to do at this point is
21 go into the comment and then, if we need to, go to
22 these other presentations.

23 So, Tom, do you want to go ahead and
24 speak? If you'd go up to the microphone and
25 introduce yourself.

1 MR. FULKS: Thanks, Tim; thanks,
2 Commission representatives -- staff, and ARB for
3 being here. I appreciate that very much. My name
4 is Tom Fulks, I'm here today speaking on behalf of
5 the Diesel Technology Forum. Is my microphone not
6 working? Is that better?

7 Okay, Tom Fulks, once again, F-u-l-k-s,
8 for the record, here representing the Diesel
9 Technology Forum, which is made up of -- it's a
10 trade association made up of the diesel industry,
11 engine makers such as Caterpillar, Cummins;
12 components manufacturers such as Bosch; and
13 automakers, particularly the European automakers
14 such as Mercedes -- I don't know what they call
15 them anymore, Daimler Benz, I suppose, Volkswagen,
16 BMW and so forth.

17 And what I would like to do is just ask
18 a couple of questions and be real brief about
19 this, but I do have a couple of comments I would
20 like to make.

21 And the first question I had was under
22 executive summary page 4, the first paragraph.
23 Just a real quick question in terms of process.
24 The quote here is that optimal alternative fuel
25 mixes were determined. And I'm just checking to

1 see what the methodology is or was to have
2 determined what those optimal fuel mixes are.

3 Because I've searched the document and I
4 can't find exactly how that conclusion was
5 reached. And it would be very, I think,
6 elucidating just to find out how your staff came
7 to that conclusion.

8 Again, on the same page -- well, I guess
9 this is on page -- executive summary page 6.
10 Under vehicles, the vehicles that are listed to be
11 in service by 2020, I suppose, includes everything
12 but light duty diesel vehicles.

13 And what's very interesting about this
14 omission is that of all the vehicles that are
15 listed on this page as to what should be in play,
16 including flexible fuel vehicles, they're in play
17 right now; biofuel vehicles, there are some, not
18 many; plug-in electric vehicles, plug-in hybrids,
19 there aren't very many that I'm aware of; fuel
20 cell vehicles, aren't very many that I'm aware of.

21 Yet, at the same time we've got
22 announcements of product releases this coming
23 spring for VW with the light duty diesel Jetta.
24 That's an emissions compliant Jetta. It meets
25 federal tier 2 -- emissions regulations,

1 California emissions regulations for ULEV.

2 I believe Mercedes Benz is going to be
3 announcing next week some time the introduction of
4 its E-320 Blue tech diesel in California. You've
5 got Audi making noises about the Q7. Every
6 European automaker, just about, has made product
7 announcements regarding actual vehicle launches in
8 California either late this year or early next
9 year.

10 MS. SHAPIRO: Tom, I want to interrupt
11 you. Are you saying that a light duty diesel
12 vehicle is an alternative fuel using vehicle? I'm
13 not understanding your comment.

14 MR. FULKS: Absolutely. Without the use
15 of a light duty diesel powertrain you can't use
16 biodiesel fuel. You can't use renewable diesel
17 fuel.

18 And so you've got power plants here such
19 as flexible fuel vehicles, they use ethanol and
20 gasoline. What I'm saying is without a light duty
21 diesel vehicle you can't use biodiesel unless you
22 just move it over to the heavy duty sector.
23 That's exactly what I'm saying.

24 MS. SHAPIRO: Okay.

25 MR. FULKS: And so I guess my point is

1 the omission of light duty diesel vehicles from
2 this list precludes the use of renewable diesel
3 fuel or biodiesel fuel in the light duty vehicle
4 segment.

5 Now, moreover if you get into the next
6 bullet, and we're talking about market niches, to
7 consigned heavy duty diesel vehicles, onroad heavy
8 duty diesel vehicles to a market niche as a
9 potential use of biodiesel fuel, is, in my
10 opinion, a pretty grave error.

11 Because you've got every single diesel
12 engine on the road today capable of using an
13 appropriately high quality biodiesel blend. Those
14 are not niche vehicles. Those are mainstream
15 vehicles. And to say, once again, by relegating
16 heavy duty diesel to a niche market you're
17 ignoring the potential of reducing petroleum
18 consumption and increasing the market for
19 renewable diesel fuel in California.

20 So, if we're going to go on down that
21 path then let's turn to page 23, please. And as
22 you can see -- pardon me, I forgot my reading
23 glasses and I don't have bifocals, so I'm just
24 going to struggle with this.

25 This is the greenhouse gas analysis that

1 was put together by TIAX. And I know we worked on
2 this on behalf of another client. And once again,
3 there's no diesel vehicle in here. There's no
4 renewable diesel; there's no biodiesel.

5 And what's really interesting to me
6 about that is that if you take a look at the ARB's
7 research on the low carbon fuel standard, and this
8 is the work put out by Alex Farrell and Dan
9 Sperling, you've got, without the use of biodiesel
10 fuel at all, a renewable diesel fuel at all,
11 you've got a 22 percent CO2 reduction straight
12 across the board with the introduction of light
13 duty diesel vehicles.

14 When you layer in a renewable diesel
15 content on top of that, your own documentation,
16 and I forgot what it's called -- your own scenario
17 analysis paper, renewable diesel and biodiesel,
18 states that you get a -- looking here, I don't
19 know what the numbers are, but you've got a CO2
20 reduction within your own body of work at the CEC
21 that does not appear to be reflected in this
22 document.

23 And so once again, it's one of those
24 situations where just because you think it's
25 diesel doesn't mean it can't be used for renewable

1 fuels.

2 And, again, what I'd like to tell you is
3 diesel is the only technology that's on the road
4 today; 50 percent of the fueling stations in
5 California are diesel capable. If the proper
6 blending and proper quality assurances are taken
7 under consideration no money is necessary to pay
8 for fueling infrastructure in California.

9 And so to omit diesel in this plan is,
10 in my opinion, not only a grave disservice to the
11 consumers of California, but also appears to be C-
12 minus work on the part of our staff, considering
13 the body of work that you've already done under
14 the IEPR of 2005, which includes diesel. I know
15 you're working on the 2007 IEPR; it's got diesel
16 in there.

17 I'm just saying, go and review your own
18 documentation to go back and take a look at what
19 needs to go into this plan. Because right now, by
20 omitting light duty diesel, you're basically
21 saying heavy duty diesel is a niche market for
22 biofuels - not true.

23 The price, by the way, there's a
24 statement in here that says all alternative fuels
25 except hydrogen and something else are less

1 expensive than gasoline and diesel fuel. That's
2 absolutely not true. I'm going to just rag on my
3 own industry here. Without a dollar-per-gallon
4 subsidy from the federal government biodiesel fuel
5 and renewable diesel fuel would be way more
6 expensive than it is right now.

7 And, so, again this isn't just to say,
8 you know, biodiesel fuel is the end-all. It's one
9 silver pellet in a whole bag full of pellets that
10 need to be thrown at this problem. But to omit it
11 causes me to question the methodology and a lot of
12 other things that are going into this document.

13 And so that's just a couple of the
14 points I have. I have plenty more, but I'm going
15 to sit down now and perhaps I guess one last
16 request would be if there's any way to extend that
17 comment period beyond this Friday, that would be
18 very helpful. Primarily because, as an
19 association, we've got people in Peoria, Illinois,
20 Washington, D.C. We have them all over the
21 country. And it's very difficult to recover
22 comments from everybody in time to submit them to
23 you by your deadline.

24 And on behalf of individual clients,
25 individual companies, I'm sure we can get

1 something done. But in terms of the diesel
2 industry, itself, it's going to be very difficult
3 to rally everyone in time to meet your deadline.

4 So I would ask a little bit of
5 forbearance on behalf of the industry.

6 So, thank you very much. Any questions?

7 MS. BROWN: Well, I'd first like to ask
8 if the staff wants to respond to these questions
9 or points that you raised.

10 MR. OLSON: Yeah. One thing I'd like to
11 do is ask -- we have some staff at the tables
12 here, McKinley Addy, Diana Schwyzer, Mike
13 McCormack, and I'd like Mike Jackson from TIAX to
14 join us up here, if you don't mind.

15 Some of the things we can do are just
16 clarify your comments. But part of this is you're
17 raising questions that I think we need to put back
18 to the Commissioners, whether or not, as Rosella
19 asked earlier, diesel is considered an alternative
20 fuel. What aspect of diesel, biodiesel, renewable
21 diesel is considered an alternative fuel.

22 So, part of it is this. Diesel is kind
23 of a target from a petroleum reduction standpoint.
24 Yet, when blended with other fuels you can meet
25 part of the goals. So we want to make sure we're

1 capturing that.

2 And in the scenarios diesel does have a
3 contribution, pretty significant contribution,
4 just like gasoline in each one of the moderate
5 growth scenarios.

6 MR. FULKS: Well, under your CO2
7 analysis, diesel actually has a greater
8 contribution for reducing CO2 than ethanol does in
9 any scenario.

10 And so I'm just curious why that was
11 left off of that very critical slide, in terms of
12 CO2 analysis.

13 MR. OLSON: Okay. There's another
14 factor in there, too, and that's to what extent
15 does diesel qualify more than once for the
16 different policies. So, for example, --

17 MR. FULKS: That's a good question. I'm
18 not here to dispute that. But my question is if
19 you're going to treat ethanol as an alterative
20 fuel -- ethanol must be blended with gasoline --
21 how on earth can you exclude diesel from the same
22 discussion. Because you have to blend diesel with
23 a biodiesel blend. It's the exact same thing as
24 gasoline, yet you're treating gasoline as an
25 alternative fuel in this scenario and you're not

1 treating diesel as an alternative fuel.

2 MR. OLSON: I'm going to ask Mike
3 Jackson if you have any clarifications you'd like
4 to make, since --

5 MR. JACKSON: Mike Jackson, TIAX. On
6 the blend strategies we looked at both the -- and
7 fully acknowledged that blending either components
8 into gasoline or blending components into diesel
9 are a viable strategy for displacing petroleum, as
10 well as reducing greenhouse gas emissions.

11 And the strategies in the scenarios that
12 are given in this report include blending
13 biodiesel in the light duty diesel sector, as well
14 as blending diesel in the heavy duty sector. It's
15 not excluded.

16 What distinction is made in the report
17 is that diesel technology is considered an
18 efficiency improvement, and therefore not
19 accounted in the alternative fuel GHG
20 contribution. But the biofuel component is
21 included in the GHG --

22 MR. FULKS: Okay, --

23 MR. JACKSON: So -- so, what you have in
24 the light duty sector, as projected by the CEC, is
25 because of the high prices of gasoline you have

1 diesel in the light duty sector capturing a much
2 larger market segment as it goes out in time. And
3 that is included in all the analysis that was done
4 in this plan.

5 MR. FULKS: So, under the low carbon
6 fuels standard, and the CO2 analysis, light duty
7 diesel is considered a CO2 reduction strategy
8 without the use of biofuels?

9 MR. JACKSON: As done by UC. It's up to
10 ARB to decide whether that will be the case or
11 not.

12 MR. FULKS: Okay. I guess it's up to
13 CEC to decide whether your analysis is to be the
14 case or not. And so that's what I'm saying is
15 that you have all this body of work out there
16 that's in play, and I would encourage you to
17 include as much of that work as possible in this
18 plan so that the plan isn't held up for attack by
19 folks from my industry by simply pointing to other
20 bodies of research and saying, you know, it's
21 tomato/tomato.

22 I would encourage you to be as inclusive
23 as possible as opposed to exclusive of a
24 technology that's on the road today.

25 So, again, we'll work with staff

1 privately to talk about these things as we go.

2 And thank you very much for your time.

3 MR. FLETCHER: If I could just make one
4 comment on that. And Mike is absolutely correct
5 about how we handle diesel in the low carbon fuel
6 standard is still a bit of a mystery right now.
7 Because, you know, we can envision scenarios where
8 we might double-count or double-credit potential
9 emission reductions, but not double-count emission
10 reductions.

11 And so how we handle that is still up in
12 the air. We certainly agree that when you're in
13 the biodiesel and renewable diesel arena, you are
14 talking alternative fuels. And in the staff
15 writeup, in the recommendations, if you look at
16 the previous one on fuels, there is reference to
17 biofuels. And if you look back in terms of how
18 biofuels are defined, that includes renewable
19 diesel and biodiesel.

20 So I think it is addressed; maybe not
21 highlighted as much. But, again, we're looking
22 at, you know, if you're at a B-5 you're looking at
23 maybe 200 million gallons of biodiesel penetrating
24 the market, as opposed to ethanol where you could
25 get substantially more.

1 So there is a market. And I think
2 that's one of the reasons why we considered it a
3 bit of a niche market right now. Until we can
4 bust through on that B-20, which is something that
5 you folks have control over to a certain extent in
6 terms of what you're willing to certify and verify
7 in terms of the diesel technology, and what the
8 engines can handle.

9 So we're hoping, we're working, you
10 know, we're working with you folks to try to get
11 that B-20 verification in place for the
12 alternative devices. So, I think we can --

13 MR. FULKS: I appreciate that. And
14 you're right, many people in our industry are
15 voting no on the ASTM standard for B-20 right now
16 because of quality issues.

17 But a couple points. With regard to
18 ethanol, you cannot -- first of all, diesel is
19 completely ignored in the executive summary of
20 this document. And that's what caused me concern.
21 In the heavy duty side it's relegated to a niche
22 market, which is just inaccurate.

23 Secondly, if you're going to include
24 ethanol blends as an alternative fuel under
25 consideration, you must require diesel as well

1 just in terms of fairness to the technologies.

2 And third, the fact that it's difficult
3 for staff and everybody to figure out where the
4 credits are going to be distributed amongst the
5 supply chain of diesel fuels, and it is an
6 absolute concern, but that shouldn't -- just
7 because we can't figure out the math doesn't mean
8 we ought to omit the technology in the analysis.

9 And so, because it's difficult doesn't
10 mean it's impossible. I guess what I'm saying is
11 diesel deserves to be at the table along with
12 these others.

13 Just because of the math, look at the
14 number of vehicles coming to market right now. If
15 you ignore that, then your methodology is subject
16 to question.

17 MR. FLETCHER: Well, the number of
18 vehicles is somewhat of question, also. There are
19 vehicles being introduced, but, you know, how much
20 of a role are those going to play is uncertain.

21 And, you know, they are likely to be
22 relatively small compared to the heavy duty market
23 and the amount of fuel that's being used --

24 MR. FULKS: Absolutely true, for the
25 short term.

1 MR. FLETCHER: Sure.

2 MR. FULKS: Yes.

3 MR. FLETCHER: And that's, you know,
4 that's why we're looking at 12, 17, 22 and then
5 the vision in 2030 to 2050, which is a different
6 situation.

7 MR. FULKS: Okay, thank you.

8 MS. BROWN: I would like to just add one
9 thing, too, and that is that we didn't intend to
10 include -- or exclude alternative fuel blends. In
11 fact, one of the findings on page ES-4
12 specifically says that we're promoting alternative
13 fuel blends of both gasoline and diesel as a near-
14 term strategy for transitioning to greater and
15 greater use, so --

16 MR. FULKS: My greatest concern is the
17 audience over at the State Capitol, who is reading
18 executive summaries. And if they're not seeing
19 something in front of them, then it's not there.

20 So, thank you.

21 MR. OLSON: Okay, we have a question on
22 the phone.

23 MR. ADDY: Tim, Tim, --

24 MS. SHAPIRO: Tim, McKinley wanted to --

25 MR. OLSON: Yeah, sorry, go ahead,

1 McKinley.

2 MR. ADDY: Tom, before you leave, you've
3 asked how did we -- this is McKinley Addy with the
4 Energy Commission -- you asked how did we
5 determine the optimal mixes. And perhaps this
6 response might help with an understanding.

7 We applied multiple criteria that
8 included looking at the all fuels use, the
9 petroleum displacement potential, the greenhouse
10 gas reduction potential, the contribution to the
11 low carbon fuels standard objectives. And then
12 environmental criteria.

13 And then we applied the combination of
14 those to the achievement of the goals that Tim
15 alluded to earlier. And to the extent that the
16 mixes, as we've illustrated in the report, achieve
17 those goals, we determined them to be sort of
18 ideal or examples.

19 MR. FULKS: Thanks, McKinley. If you
20 could just -- my recommendation is asterisk that
21 in the report; put that in writing so the question
22 doesn't come up again. Just put it down so we
23 know what the methodology was.

24 MR. ADDY: And then one final point, I
25 believe Mike Jackson alluded to this, but on pages

1 42 and 41 and 46 you see graphs illustrating the
2 contribution of the biodiesel component, the light
3 duty biodiesel component to the overall petroleum
4 reduction fuel goals. Okay.

5 MR. FULKS: Thanks.

6 MR. OLSON: Okay, we have a question on
7 the phone. Please state your name and
8 affiliation, please.

9 MS. WILLIAMS: My name is Silvia
10 Williams; I'm from (inaudible), based in London.
11 My question is on GTL fuel. And I wanted to
12 follow up on the (inaudible), the comment about
13 diesel may have contributed to engine efficiency
14 and reducing carbon.

15 But also to ask a question about the BTL
16 fuels which are only mentioned in very limited
17 comment in the ES-8 in the executive summary.

18 You say that (inaudible) offer or
19 suffered from cost barriers and limited
20 environment benefits. I believe that you get
21 rather skewed with the family of Fischer Tropsch
22 liquids. There is a great deal of difference
23 between fuels that are made from natural gas,
24 biomass and coal.

25 And I think since you mention in the

1 conclusions that we need all alternative fuels.
2 We think that you ought to think another country
3 could be evolving the BTL fuels which is already
4 available and will be in increasing volumes. It's
5 cost effect is and have significant reductions of
6 (inaudible) particulate result.

7 So, I wanted to ask really the comments
8 of the emission from the class, the BTL fuels
9 (inaudible) for that view.

10 MR. OLSON: Okay, McKinley or Mike
11 Jackson, do you have a comment, do you have any --

12 MR. ADDY: Mike, I'll take this.

13 MR. JACKSON: Sounds like two different
14 kind of comments.

15 MR. ADDY: This is McKinley Addy with
16 the Energy Commission. I think I'll respond to
17 the comment first about the performance of GTL on
18 a well-to-wheel basis. I have in front of me the
19 Energy Commission's adopted fuel cycle assessment.

20 And on page 42 and 43 of that report,
21 Silvia, you know, we worked with you very closely.
22 We show that on a well-to-wheels basis the
23 greenhouse gas emissions performance for GTL
24 remote natural gas source has a negative
25 greenhouse gas emission benefit.

1 And so we did not necessarily combine
2 all of the fuels into XTL and characterize them
3 based on that combination. But we looked at the
4 individual fuels that would include the gas-to-
5 liquids, the coal-to-liquids and so on.

6 There is also the issue of the cost
7 performance of GTL in offsetting that negative GHG
8 emissions performance. So we account for that in
9 characterizing the fuels potential in the all
10 fuels plan. And that's what you see being
11 characterized in the executive summary that you
12 refer to.

13 MS. WILLIAMS: I'm sorry, I didn't
14 understand that comment about cost. As I say, you
15 know, GTL is now commercially available. So if
16 you compare it, and you put it on a level playing
17 field with the other alternative fuels, before
18 subsidies, and you have a realistic sense of it.

19 MR. JACKSON: I'm sorry, Silvia. This
20 is Mike Jackson, TIAX. Could you repeat your
21 question again?

22 MS. WILLIAMS: Well, I understood
23 McKinley was commenting about the cost of GTL
24 fuels, not comparing with the other alternatives.
25 And I am querying that on the basis of being like

1 a level playing field where GTL fuel does not
2 track tax subsidies as other fuels do.

3 MR. JACKSON: Yeah, I don't think --

4 MS. WILLIAMS: So I mean you strip out
5 all the tax subsidies, is the cost of GTL fuel
6 less attractive than other alternatives?

7 MR. JACKSON: My recollection, when we
8 were looking at the various XTLs, so to speak, the
9 various fuels or feedstocks that you could use to
10 generate diesel-quality fuels, one of the issues
11 that came up was the gas-to-liquids, was the fact
12 that it's great for displacing petroleum use, but
13 you do have this currently the engines that are
14 designed and when it's used has this sort of
15 negative benefit relative to greenhouse gas
16 emissions.

17 Now, that said, that doesn't mean that
18 that couldn't be still a component to a policy to
19 reduce petroleum dependency. But if you're trying
20 to simultaneously reduce petroleum use, as well as
21 do greenhouse gas emissions, then gas-to-liquids
22 doesn't score very high. It's not a matter of
23 cost at this point, it's a matter of what you're
24 trying to achieve.

25 Further, you're absolutely right about

1 BTLs or biomass-to-liquids. And not knowing
2 exactly how much to project there, we did include
3 in the scenarios going to a B-20. B-20 could be
4 biodiesel, it could be a BTL, could be whatever it
5 is, but it's bio-derived that gets you there, that
6 gets you the greenhouse gas emission that you
7 want. We don't know what it's going to be in the
8 future, but that's a good way of getting the fuel
9 into the marketplace.

10 Now, with something like a BTL if you
11 had enough production it could go in higher than a
12 B-20. So that was how we played the various XTLs
13 into the diesel market. That was our thinking,
14 anyway.

15 MS. WILLIAMS: I guess the question I'm
16 asking is whether we have a level playing field
17 for XTLs. And I'm really looking at BTLs. We've
18 had (inaudible). I'm recognizing your work, but
19 you have to deal with alternatives that are not as
20 well set up. You're expecting technology to
21 improve over a period of time.

22 What I'm asking really is to recognize
23 that BTL technology -- and is improving. I'm
24 asking we should be thinking of BTL in the same
25 way as some of the alternatives. (inaudible).

1 MR. ADDY: Silvia, McKinley here again.
2 You will note in the plan that a key philosophy is
3 that we don't exclude any of the fuels from
4 participating in the marketplace to the extent
5 that they can be competitive on an environmental
6 basis, as well as a cost basis.

7 So, while the report may not have
8 explicitly highlights XTLs or GTL in the example
9 illustrations, that does not preclude GTL from
10 participating in the California nonpetroleum fuel
11 marketplace, assuming that you can meet the cost
12 performance objectives.

13 MS. WILLIAMS: I'm sorry, (inaudible)
14 are you saying that the (inaudible)?

15 MR. ADDY: No, I'm saying that the plan
16 does not exclude any of the XTLs from
17 participating in the California market as long as
18 they can achieve the environmental performance
19 targets and the design petroleum reduction goals
20 within the cost objectives of the targeted market
21 sector.

22 MS. WILLIAMS: Okay, but it doesn't seem
23 to say that in your report. I'm not seeing that
24 in your report. Maybe it's there, but it's not
25 very clear.

1 MR. ADDY: Well, I think we say that,
2 and perhaps we will clarify that so that there's
3 no confusion.

4 MS. WILLIAMS: All right.

5 MS. SHAPIRO: Sounds like a suitable
6 errata.

7 MR. OLSON: Any other questions, Silvia?

8 MS. WILLIAMS: No, thank you.

9 MR. OLSON: Okay, thank you very much.
10 I have a blue card from Paul Wuebben, Clean Fuels
11 Office, South Coast Air Quality Management
12 District.

13 MR. WUEBBEN: Good morning, or
14 afternoon. Nice to see all you here, and we're
15 certainly talking about an important topic. We
16 first want to say that we really commend the
17 agencies for putting together an important
18 document that's going to hopefully pull together a
19 lot more creative ideas. But it's certainly a
20 very constructive first step. So I do want to say
21 that, you know, starting out.

22 I'm, of course, Paul Wuebben with the
23 South Coast Air Quality Management District. And
24 I'm here to basically give some early reactions
25 and feedback on the report. We appreciate the

1 added time, and we would concur that a little bit
2 of extra time would certainly be appropriate,
3 given the importance of the topic and the scope of
4 the discussion.

5 Starting out, we think that one area
6 that could really enhance the document would be to
7 identify air quality as a central and equal
8 footing as a goal, relative to the other goals
9 that are enunciated.

10 I note that on page ES-9, when you're
11 referring to the first recommendation out of the
12 box, actually quotes the clean alternative and
13 renewable fuel vehicle and advanced technology
14 initiative. First word is clean. Yet air quality
15 goals don't seem to be central to the report. And
16 we think that that really is a fundamental nexus
17 to be identified.

18 Another kind of related issue is that
19 while the plan is an important collection of
20 scenarios and examples and goals, that the area of
21 accountability and a specific past innovation may
22 not be as heavily emphasized as you'd like.

23 In stepping back I looked up in the
24 dictionary the definition of a plan, and what I
25 came out was a detailed method of doing something.

1 It's not simply a collection of goals and
2 milestones. It's a specific plan of doing
3 something.

4 And I think in that regard that the role
5 of mandates to actually get a lot of your goals
6 accomplished, that role of mandates is under-
7 utilized. Essentially it's not referred to at
8 all. There's a lot of references to facilitating
9 through ARB action and relying on incentive funds.
10 Certainly all those are appropriate. But there's
11 also an important role for specific mandates.

12 And I'd like to just give an example.
13 Our South Coast fleet rules, as you know, require
14 all fuels, if they are the lowest emission
15 certified technology, they've been subject to the
16 Supreme Court review. And successfully dealt with
17 that challenge. They have operated for five or
18 six years now. The represent, I think, a
19 milestone for the country, really, in establishing
20 natural gas as an important alternative and clean
21 technology.

22 We estimate that between just right now
23 and 2010 an additional 5000 heavy duty natural gas
24 engines could be brought into the marketplace and
25 will be as a result of those rules.

1 If you extrapolate that to the rest of
2 the state, you could conceivably estimate maybe
3 15,000, easily a tripling of that just in the
4 South Coast.

5 So that type of a model perhaps pursued
6 by the Air Resources Board with the authority it
7 has in its fleet rules. If you mimic what we did
8 in the South Coast and expand it with the latest
9 technology and learning, lessons learned, if you
10 will, we think that you can get a lot done, you
11 know, on an accelerated time schedule.

12 Really, to sum up that idea I think what
13 I would view this plan as is really a watch and
14 ask plan. You're watching the technology, you're
15 trying to facilitate it, you're hoping that
16 investors will come forward with a huge amount of
17 investment funding. But facilitating action is
18 not a mandate. Monitoring action is not
19 regulatory enforcement.

20 So, one other area I think, kind of
21 continuing, is that this area of technology
22 optimization. And here we think that there's some
23 areas for synergies. Because of the scope of the
24 subject maybe your staff didn't have time to look
25 at this. But what we're finding now, I think, is

1 with the emergence of electric drive trains as
2 essentially we're in a new era. An era of that
3 technology is going to mediate throughout the
4 vehicle segment, heavy duty and light duty.

5 That there is opportunities to synergize
6 plug-in hybrids, for example, with natural gas.
7 Or plug-in hybridization with flexible fuel
8 technology. And synergize that with E-100 rather
9 than E-85, for example.

10 You could imagine a whole host of
11 optimization strategies. We look, as an example,
12 of the Saab plug-in hybrid, flexible fuel, E-100
13 that took full advantage of the latent heat of
14 vaporization of ethanol, which is over twice that
15 of gasoline. That latent heat of vaporization
16 gives you a charge cooling effect which enhances
17 the efficiency. They ended up with a much more
18 efficient vehicle than the conventional FFV that
19 drives some of your volume judgments there.

20 So, those are some examples of some
21 technology synergies which we think are really
22 going to be crucial.

23 Just three or four other specific
24 comments. When we look at scenario example one,
25 you refer to it as an example, on page 39, it

1 focuses quite a bit of attention on E-85. I would
2 like to say for the record, and in full
3 appreciation of the hard work ARB's done on the
4 predictive model, that E-15 does not meet the test
5 of the predictive model.

6 It would be an illegal fuel formulation
7 in the state, as we speak. It certainly is not
8 applicable to the current legacy fleet, which is,
9 you know, tens of millions of vehicles. So it's
10 not a trivial legacy.

11 It certainly would be a sub-optimized
12 use of the flexible fuel vehicle technology. They
13 could run on it, but they could run a lot more
14 efficiently and with better air quality
15 implications on a higher blend.

16 And how I'd -- what I'd suggest you
17 think of that as, is essentially perhaps the
18 second-worst case in terms of air quality. You do
19 have a NOx increase. You would have an
20 evaporative emissions increase. You'd have an
21 increased permeation emissions, as well. Without,
22 you know, any attendant serious significant
23 benefit.

24 Going on then to example number three
25 that's on page 48, that focuses on E-30. I think

1 that one could say, perhaps rhetorically, but
2 maybe not, that it's twice as illegal; it's twice
3 as disconnected from the legacy fleet; it's twice
4 as inappropriate. E-30 doesn't come close to the
5 predictive model requirements.

6 So, discussing a scenario in which
7 you're talking about E-30 throughout the wide use
8 by 2017 or 2022, either you're assuming a huge
9 legacy problem that has to be mitigated, or you're
10 assuming its use in flexible fuel vehicles, in
11 which case you're not taking the full advantage of
12 the FFV technology.

13 So that's just, I think, some specific
14 examples that highlight the importance, in fact,
15 the real need to elevate air quality as a central
16 joint set of objectives, along with the energy
17 dependence and alternative fuel mandates that are
18 referred to.

19 Just summing up here, on page 24 I
20 wanted to bring your attention to a statement.
21 It's stated there that, quote, "the assessment
22 evaluated well-to-wheels in the context of
23 marginal emissions associated with marginal
24 petroleum demand."

25 That raises several very important

1 questions. One is, as we understand, the modified
2 GREET model that was referred to by staff, that
3 looks essentially at an average emission factor.
4 That is not a marginal emission factor. It's a
5 static, not a dynamic model.

6 And let me give you some examples. It
7 takes an average acre as the basis for the poplar
8 or the so-called conventional corn. It doesn't
9 look at the next acre of CRP land, or wherever
10 else that next acre of corn-based ethanol
11 production would come from.

12 Is it coming from a soybean sustainable
13 plot that requires additional amount of nitrogen
14 fertilizer, enhancing additional N2O? Or is it
15 coming from drought-governed CRP lands that we
16 know that under those conditions that the nitrogen
17 uptake in the soil is less, and that the N2O
18 emissions are even higher?

19 And why we focus on N2O, of course, is
20 that 70 percent of agriculture is greenhouse gas
21 contribution globally is from the N2O fraction.
22 And, of course, it has a 320 or a 296, depending
23 on what, you know, are recent views, but
24 essentially 300-fold greater than the CO2 in terms
25 of its average impact. So it has a multiplicative

1 effect.

2 So, while what looks like a small
3 effect, namely that when you look at the amount of
4 nitrogen that ends up in the atmosphere in a
5 farming environment, you're talking about maybe 2
6 percent, is the current IPCC assumption, on the
7 amount of nitrogen converted to N2O, nitrous
8 oxide.

9 If that 2 percent goes to 4 percent, a
10 recently analysis by a Nobel Prize winning
11 chemist, suggests that you wipe out the entire
12 benefit of biofuels. I certainly don't know the
13 answer to that.

14 But this gets to another point within
15 this greenhouse gas GREET model process, that what
16 is really embedded in all of these judgments, and
17 they're probably the best that we can make at the
18 time, but we should realize the need for great
19 humility, because these are not validated numbers;
20 they're not audited. No one has been able to
21 perform a farm-to-farm analysis, a year-to-year
22 analysis.

23 There's a large range of research
24 questions. And because, as I mentioned, there's a
25 lot of sensitivity to how small factors can

1 propagate into large factors, especially in the
2 context of a multiplicative greenhouse gas
3 analysis, that these are very central questions at
4 the end of the day.

5 Another example --

6 MS. BROWN: Excuse me, --

7 MR. WUEBBEN: Surely.

8 MS. BROWN: -- can I get some
9 clarification here, Paul? Are you questioning the
10 methodology, or are you questioning the nature of
11 the statements that don't really --

12 MR. WUEBBEN: Well, I think that this
13 particular --

14 MS. BROWN: -- take into account
15 feedstock variation? That's what I'm hearing you
16 say.

17 MR. WUEBBEN: Well, I do question this
18 particular statement, because I don't believe that
19 it is a marginal emissions that is being analyzed
20 through the GREET model. Or, if it is being -- if
21 you're meaning a marginal analysis relative to
22 gasoline production, it needs a very careful
23 definition.

24 Because even if you looked at, quote,
25 the marginal gasoline, based on what was in

1 today's Wall Street Journal, you can find examples
2 of the increasing density of crude throughout the
3 United States.

4 In fact, in that Wall Street Journal
5 today they note that most of the top sources of
6 U.S. imports are producing less light crude oil.
7 So Canada, Mexico, Saudi Arabia, Venezuela,
8 Nigeria, they're all producing heavier crude than
9 they were in 1999, for example. They note a
10 seven-year switch.

11 And so even assuming a fixed gasoline is
12 very difficult. And while we certainly don't have
13 a solution or answer, I think it just points to
14 identifying carefully the uncertainties that exist
15 in the analysis. And trying to be precise about
16 the range of that uncertainty and the possible
17 ripple effects. Because there may be some
18 unintended consequences.

19 Let's see, I guess the last thing I'd
20 like to point to, and that is getting back to this
21 point on air quality. And I think that this will
22 conclude our comments basically.

23 That one reason why it's important to
24 note air quality is that the push for alternative
25 fuels may include, as one of our prior speakers

1 mentioned, a push for light duty dieselization.
2 And if one were only worried about greenhouse
3 gases, that might be a very wise thing to do.

4 However, there is data that has been
5 developed by Ford Motor Company that shows the
6 much higher propensity of a diesel cycle to
7 produce highly nucleated, very small particles.
8 Those are called nanoparticles.

9 Similarly, there is a recent UCLA study
10 that was just reported on in The L.A. Times about
11 a month or two ago, that identified the effect of
12 these nano, very small particles. These are small
13 enough to not only break through cellular walls,
14 but what their analysis found, that these are so
15 small that they're able to directly affect DNA.
16 And that the changes they've identified with these
17 ultra low, small particles is an effect on DNA
18 such that it exacerbates the effect of high
19 cholesterol on heart disease.

20 So while that's a chain of three or four
21 factors, ultrafines, I think, are clearly an area
22 that will require more careful assessment before
23 we would fully embrace an additional
24 dieselization, particularly in the light duty
25 segment.

1 One last thing to kind of frame that, as
2 you well know, the ARB standards define particles
3 based on their mass emissions, not on the size
4 distribution, and not on the number of particles.
5 So I think that that is an area that will require
6 some careful assessment going forward.

7 But we certainly are pleased that you've
8 put together as much information as you have.
9 It's a challenge to do what you've done. And so
10 we commend that. And hopefully we will certainly
11 be looking for opportunities to work with you to
12 address some of these questions further. Thank
13 you.

14 MR. OLSON: Okay, thank you. Mike
15 Jackson, McKinley, any comments? Any
16 clarifications you'd like to make on that
17 language?

18 MR. ADDY: Let Mike start first.

19 MR. JACKSON: Paul raised a number of
20 points. One is that air quality should be central
21 in the development of any kind of plan. And that
22 was the intent of the legislation, I believe. And
23 that was the intent of putting together this plan
24 and the previously performed full fuel cycle
25 analysis, or well-to-wheels analysis, where we

1 looked at having no negative impact of any of
2 these alternative options.

3 And our conclusions when we went through
4 the full fuel cycle analysis was that there were
5 some fuels that you had to look at and make sure
6 that they weren't going to increase criteria
7 pollutants. And you'd have to pay attention to
8 that. And that was the intent of this plan.

9 Surely, if you are going to have a fuel
10 like ethanol blended at 30 percent into gasoline,
11 that vehicle that would use that fuel would have
12 to be optimized for meeting all the emission
13 standards within California. It's not assumed
14 that that would just be a blend into existing
15 technology and you would be off and running.

16 So the intent was to pay attention to
17 air quality, and not to go backwards at all.
18 Maybe those words aren't clear enough in this
19 plan, but that surely was the intent of everybody
20 that's worked on this plan, from my perspective.

21 Relative to Paul's comment on marginal
22 emissions, he refers specifically to land use
23 issues and I think in terms of the peer review
24 that we've gotten in terms of the previous reviews
25 that have happened here, as well as on the low

1 carbon fuel standard, it is clear that land use
2 issues are not very well captured in any modeling
3 that's done on any lifecycle cost basis, or any
4 well-to-wheels basis yet anywhere.

5 And people are working on this to try
6 and figure it out. As Paul mentions, it's
7 extremely complicated. You have things like
8 nitrogen fixation that's happening. These issues
9 have got to be looked at more closely.

10 Nevertheless, what we tried to do, and
11 what staff tried to do in this plan, was to bound
12 the possibilities. And by that I mean if you had
13 a biomass that is cellulosic-derived, I think we'd
14 all acknowledge that that probably has a better
15 greenhouse gas emission benefit than say something
16 that's done on row crops like potentially corn-
17 based ethanol.

18 And that was the intent, was to try to
19 give a higher and lower bound of what is possible.
20 To kind of indicate what would be needed in terms
21 of what research we'd have to go to in the future.
22 And where we would have to spend our money. Where
23 would we get our bang-for-buck in terms of meeting
24 greenhouse gas emissions in the future of
25 California.

1 Relative to looking at, for example, row
2 crops such as corn, it is a marginal analysis in
3 the sense that we are looking at where the next
4 increment of corn is going to come from. And it's
5 assumed it's going to come from existing crops.
6 It's not going to take over other land, other than
7 other croplands. I mean, it will take over other
8 cropland, but it's not going to take over switch
9 grass, not going to take over prairie grass,
10 things like that.

11 But it also does assume that the
12 gasoline is going to be produced outside of
13 California. And it is going to be imported into
14 California. And we also looked at various sources
15 of crude oil, so you get an example of what the
16 positive and negative benefits are going to be of
17 various sources of crude oil relative to
18 greenhouse gas emissions and your baseline.

19 So, I guess I'll stop there.

20 MR. ADDY: I don't think I have anything
21 else to add.

22 MR. OLSON: Okay, let's go to, on the
23 phone, Gina Gray from the Western States Petroleum
24 Association. Are you still there, Gina?

25 MS. GRAY: Yes, I am; can you hear me?

1 MS. SHAPIRO: Just fine.

2 MR. OLSON: Go ahead.

3 MS. GRAY: All right, thank you. I
4 guess, first of all, I'd just like to say that we
5 do at WSPA have quite a few comments to make. We
6 will try to submit them by Friday. I think I
7 heard a couple of other pleas for additional time,
8 and anything of that nature would definitely be
9 appreciated.

10 I would also like to say just off the
11 top that I think we would strongly agree with the
12 comments from Vehicle Technology Forum, and with
13 Shell in terms of the diesel and XTL comments.

14 Although I know that the CEC and ARB in
15 this plan have tried to indicate that they have
16 not, quote/unquote, picked winners, there are
17 definitely gaps in the executive summary, which as
18 someone pointed out, are the places where the
19 policymakers tend to look. They don't tend to
20 look in the very back of the report.

21 And, as well, the way that some of these
22 are worded it definitely indicates that, as in the
23 XTL case, because of certain parameters things
24 seem to not be sort of on the list.

25 And I guess one of the questions we

1 would have is, and I'll try and weave in some of
2 our comments together, but it appears that the
3 whole AB-1007 plan, when it was initiated, was
4 focused certain objectives and goals, which Tim, I
5 think, laid out. Which focused on petroleum
6 reduction and increase in alternative fuel.

7 And I think Tim also mentioned in his
8 discussions that various other state goals crept
9 in as the process worked its way through.
10 Primarily things like AB-32 dealing with
11 greenhouse gases, the bioenergy action plan and
12 LCFS.

13 And I think what we have seen in this
14 plan is a definite slant towards treatment of
15 greenhouse gas issues over what we seem to see
16 over the other months we have to, sort of what we
17 see here today, which was much more focused on
18 petroleum reduction and on increasing alternative
19 fuel, in some fashion or another. And looking at
20 what the costs were, what the barriers and
21 challenges were, and how to overcome those.

22 And now it seems that certain fuels are
23 being struck off the list, in a sense. I know
24 that's a little strongly worded, but because of
25 their greenhouse gas impact.

1 And I'd be interested in ARB and CEC's
2 comments relative to the role of this plan versus
3 the LCFS. Because basically I think in our view a
4 lot of the work that's going to happen on the LCFS
5 is going to determine how a lot of these
6 alternative fuels roll out in the state. Not
7 necessarily spending \$100 million a year on the
8 fuels that were sort of, quote/unquote, selected
9 for optimization -- whatever the word it was --
10 optimal grouping in the plan.

11 And so we'd be interested in comments on
12 how you see this plan, and maybe potentially the
13 dangers of this plan, trying to pursue
14 incentivizing and pushing forward certain fuels
15 and infrastructure and everything to do with those
16 fuels, while on the other hand we have the LCFS at
17 work, which may be actually leading to other fuel
18 development, et cetera.

19 So, I'll leave that one and I'll weave
20 in one more component before I shut up here, but
21 basically air quality. And I think we heard some
22 folks talk today about how the plan is not meant
23 to have any sort of air quality impacts.

24 I think it's interesting, though, that
25 in a couple of spots in the plan there are words

1 such as no significant degradation in air quality.
2 And in one of the executive section, I think ES-8,
3 it says the plan is meant to meet California's
4 goals, one of which is to not cause a material
5 increase in emissions.

6 And I guess we're wondering what
7 material and significant, how those are defined.
8 And whether or not the state is, in fact, saying
9 greenhouse gases be primary air quality issue that
10 needs to be addressed, and some of the other
11 traditional air quality issues, you know, aren't
12 quite as important. There are certain tradeoffs
13 that have to be made, and the primary goal for the
14 state is greenhouse gas reduction.

15 So, I know I tried to weave a lot of
16 things all in together in one question, but have
17 at it.

18 MR. OLSON: Let's start, Bob Fletcher.

19 MR. FLETCHER: Have at it, huh? Oh.
20 Sounds like a challenge.

21 (Laughter.)

22 MR. FLETCHER: I will address the
23 question of the relationship of AB-1007 with the
24 low carbon fuel standard, and clearly, as we have
25 proceeded over the last 18 months, you know, kind

1 of the landscape has changed.

2 The low carbon fuel standard posed quite
3 a challenge, I think, to the AB-1007 process in
4 terms of making sure that both programs are
5 complementary. And we think that we have done
6 that. We think that's something that is
7 important.

8 We have tried to not take fuels off the
9 table. We have tried to make it clear what the
10 constraints and obstacles for some of those fuels
11 to play. And the question that we have to face is
12 if we, you know, are promoting alternative fuels
13 that have kind of adverse consequences in other
14 goals and policies, then is that a good policy for
15 us to pursue.

16 And we think not. We think that the
17 information should be available to those that need
18 to ultimately make the decisions, like you folks,
19 Gina and others, that are going to have -- you
20 know, it's going to be a bit of a challenge to see
21 how you do that.

22 But I don't think that there are
23 conflicts in the two policies. I don't think that
24 there's conflicts in the goals of the two
25 policies. It just is a little more complicated.

1 And, you know, the way I view the low
2 carbon fuel standard is sort of this -- I think
3 one of our Board Members, I've stolen this phrase
4 from him, but he calls it the durable framework
5 for the implementation of the alternative fuels
6 program.

7 And that's kind of how we view this, is
8 that it's going to set the regulatory framework
9 for the penetration of these alternative fuels.
10 And that there is a wide range of how these fuels
11 play. And as you look at how they play, you have
12 to figure out what their impacts are. So, that's
13 kind of how I view that one.

14 Relative to the air quality aspect, I
15 mean I'm not sure where the significant material
16 came from, either. We'll have to look at that a
17 little bit. But there are always going to be some
18 sort of tradeoffs -- what?

19 MS. SHAPIRO: Part of it's in the
20 statute, so we were just quoting back what --

21 MR. FLETCHER: Oh, the statute.

22 MS. SHAPIRO: -- the statute poses.

23 MS. BROWN: AB-1007.

24 MS. SHAPIRO: AB-1007 says without
25 having --

1 MR. FLETCHER: Okay.

2 MS. SHAPIRO: Okay.

3 MR. FLETCHER: But, you know, there are
4 always going to be tradeoffs. I mean we see that
5 now with tradeoffs in NOx and PM and, you know, PM
6 and, you know, we're getting large PM reductions
7 from our diesel risk reduction program. We
8 recognize as we do that in some cases you're
9 requiring more energy to do it. And so there's an
10 adverse CO2 impact. But we think maybe that's
11 offset by the fact that we're reducing black
12 carbon.

13 So these are policy decisions that are
14 going to have to be made in the context of
15 implementing these programs. And what we want to
16 make sure is that overall we're heading in the
17 right direction.

18 MS. GRAY: I guess before anyone else
19 responds, could I just ask, you know, basically
20 the question when you say that you don't feel that
21 there would be sort of a chance that things would
22 not work out, that the LCFS is sort of flanging up
23 with this particular plan quite well.

24 But I guess there are certain elements
25 to the plan, Bob, that just, you know, for

1 example, the E-85. There's quite a section in the
2 plan on E-85, and I think Paul mentioned that, the
3 thrust to work, let's get the infrastructure out
4 there, et cetera, et cetera.

5 And if, in fact, someone was to look at
6 the plan and say, oh, E-85 looks quite prominent
7 here, let's donate X millions of dollars to put
8 the infrastructure in and let's go with that. And
9 E-85 might be a bad example, but I'm just using it
10 as an example.

11 And on the other hand, LCFS, you may
12 determine through that whole process, and, you
13 know, the people that are fuel providers, that
14 that may not be the route to go. There may be
15 other routes that are selected. And, you know,
16 those routes may not be incentivized.

17 So, I guess, in our minds at this point,
18 and I know everyone's struggling with how these
19 are all going to fit, et cetera, and even with AB-
20 32, but I think there is a danger here. And I
21 think because of the evolution that's happened
22 with this plan over time, it may have been better
23 just to have kept it more as a straight-up let's
24 meet the original goals, and not try and do this
25 last-minute sort of focus on greenhouse gas

1 reduction.

2 But, anyway, that's -- others can
3 comment.

4 MS. BROWN: This is Susan Brown, Gina.
5 I just want to comment that if you read AB-1007,
6 the greenhouse gas reduction element is pretty
7 prominent in the policy intent language. So I
8 would encourage you to do that.

9 I guess I take issue with your comment
10 that half way through this process we changed the
11 intent of the plan. Rather, I would take great
12 issue with that, given the language in AB-1007.
13 So, take a look at that again before too long.

14 MS. GRAY: I think we have, and I guess
15 the only -- I was here in the process from day
16 one, Susan, and I would just say in the workgroups
17 I didn't sense a large emphasis on greenhouse
18 gases, to be honest. So, I'm just saying it seems
19 from those who have been involved in the day-to-
20 day work on the workgroups that there's a lot of
21 emphasis upfront on what can we supply, what are
22 the costs, what are the challenges and barriers.

23 And it just seems when you read the
24 report there's a huge emphasis put on greenhouse
25 gases.

1 MR. OLSON: Gina, this is Tim Olson. My
2 comment about the other policy objectives crept
3 into the decisionmaking, I was speaking of the
4 Legislature putting this into the bill; not after
5 the fact the agencies deciding we were going to do
6 this independently.

7 And I think it's pretty clear, we spent
8 from December through most of March focusing
9 almost entirely on the full fuel cycle analysis,
10 entire environmental footprint, large emphasis on
11 greenhouse gas emission. You know, that was a
12 pretty significant effort.

13 MS. GRAY: Um-hum. And you know we
14 still have many outstanding comments on that, but
15 that's, you know, -- we will move forward and work
16 on the full fuel cycle analysis with ARB under
17 that LCFS umbrella.

18 MR. OLSON: Well, let me also make a
19 point about the differences or the interaction of
20 the low carbon fuel standard and the AB-1007.

21 Remember, one of our findings from
22 this -- and this, in fact, was in the original
23 Governor's whitepaper, that the low carbon fuel
24 standard would only get you, at best, 30 percent
25 of the proportionate transportation greenhouse gas

1 reduction goal.

2 So we concluded with the UCs sometime in
3 February, that the low carbon fuel standard alone
4 would not address these goals in entirety. And
5 that's highlighted in this report.

6 So you need to combine -- the
7 conclusions, you need to combine a group of
8 actions, regulatory and incentives, to make this
9 work.

10 I'd like to also point out that we've
11 acknowledged in this report your members'
12 responses and their interests to show that
13 biohydrocarbons are a potential option.

14 MS. GRAY: All right.

15 MR. OLSON: You see that in two of the
16 scenarios.

17 MS. GRAY: Um-hum.

18 MR. OLSON: Despite the fact that we
19 have very little information on the progress of
20 that work. And we'd like to see that information
21 over time. We're hoping that will come out of the
22 low carbon fuel standard process.

23 MS. GRAY: Okay --

24 MR. OLSON: Okay, any other comments,
25 Gina, you have?

1 MS. GRAY: Yes, just a quick one. Back
2 on the XTL, and just in the sense of Shell's
3 earlier comments, I guess.

4 Again, from a fair playing field you
5 just made the comment that you've got some
6 biohydrocarbons in the report even though you
7 don't have a lot of information. You know, a lot
8 of them aren't even pilot stage. Whereas there
9 are a lot of comments in the document that sort of
10 just handle the XTL portion of this.

11 And it seems from the comments here
12 today that a lot of the reasoning for that was
13 based on greenhouse gases.

14 So, again, just looking at level playing
15 field, just a question. Doesn't need a response.

16 MR. OLSON: Okay, thanks for your
17 comments.

18 We have another blue card from Randy
19 Friedman, U.S. Navy. Would you come up, please.

20 MR. FRIEDMAN: Thank you. My name is
21 Randal Friedman; I'm representing the United
22 States Navy, Navy Region Southwest.

23 To look at the draft report, I guess I
24 would first start off by stating that the military
25 in California is the single largest purchaser and

1 user of biodiesel in the state. And by our
2 estimates we purchase between one-third and one-
3 half of all the biodiesel sold in California.

4 So, in this context, I guess I would
5 first look on page 13 where they speak to the role
6 of the federal government. I guess I find it odd
7 that there's no mention in there that there is a
8 branch of the government that is a major proponent
9 and user of biodiesel. And, in fact, to the
10 extent that we actually, several years ago,
11 sponsored state legislation that Senator Ashburn
12 did, to insure that it would remain legal to use
13 biodiesel in California.

14 So, --

15 MS. SHAPIRO: Point well taken.

16 MR. FRIEDMAN: Pardon?

17 MS. SHAPIRO: Point well taken.

18 MR. FRIEDMAN: Thank you. Likewise, on
19 page 14, in the discussion of renewable diesel and
20 biodiesel, the statement is made that 2 percent B-
21 2 and 5 percent B-5 blends have been used in
22 vehicles in California.

23 Well, that simply isn't true. We use B-
24 10; we are not alone in that. Cities such as
25 Berkeley and San Francisco and institutions such

1 as UC Santa Cruz, that I'm aware of, B-20 is
2 actually the standard biodiesel fuel used in
3 California. So, the statement that B-2 and B-5
4 are standard and B-20 is a hypothetical goal
5 simply isn't true.

6 The truth of it is the bulk of other --
7 the bulk of biodiesel, almost all biodiesel sold
8 in California is either being used by individuals
9 as B-100 privately in their cars, or institutions
10 such as ours that is being used as B-20.

11 So I guess I would say that the accurate
12 statement would be that B-20 is actually the
13 standard biodiesel fuel currently used in
14 California.

15 Along the lines, I would also like to
16 agree with the comments we've heard before about
17 how biodiesel is treated in this report. I think
18 we have shown over a number of years now that
19 biodiesel and B-20 is an extremely viable source
20 of fuel.

21 If you go on any Navy or Marine Corps
22 installation in California, it is the only diesel
23 formulation you will find that is used in our
24 nontactical vehicles. There simply is not another
25 diesel pump that is used for our nontactical

1 vehicles.

2 And we made some considerable expense in
3 doing that, in re-plumbing our installations.
4 It's been a mandate from Congress. It's been a
5 mandate from the federal government, which again
6 gets back to the role of the federal government,
7 because this report isn't really recognizing that
8 Congress has told federal agencies in California
9 to be a leader and to be a pioneer in the use of
10 biofuels, which we are doing. And that is
11 reflected in our past purchases.

12 Where I think we might disagree with the
13 diesel industry that you've heard, and it gets
14 back to something that Bob alluded to, is we're
15 concerned that California, in its diesel
16 regulation, continues on a path that by the year
17 2020 or thereabouts essentially every diesel
18 engine on the road or on offroad in California
19 will have been required to be retrofitted with a
20 device.

21 And we don't argue with the need to
22 clean the air and remove the particulates, and we
23 are going to be in the process of doing that. But
24 none of these retrofit kits are certified or
25 warrantied for use with B-20.

1 And as I previously said, B-20 is the
2 standard fuel that is used in California, not B-2
3 or B-5. So, we would like to see ARB, and we
4 would like to see you and this report perhaps put
5 a little pressure on the industry to start
6 recognizing B-20 as a viable and existing fuel.

7 And use the power of California to urge
8 industry to move in the direction of warranting
9 their engines and their retrofit equipments to
10 cover up to B-20. We think that would be a very
11 positive step. It would be meeting our
12 Congressional mandates, and certainly meeting the
13 mandates in AB-1007, as well as AB-32.

14 Because I think people understand the
15 desirability and greenhouse gas benefits of
16 biodiesel. So we think there's a lot that this
17 report can do to move biodiesel out of this
18 admittedly niche market now. Although it's in
19 pretty wide use, there's a great deal of room for
20 expansion.

21 But we think California can be a key in
22 moving it out of that niche market and making it
23 more widespread. And making the industry, as a
24 whole, recognize B-20 as a viable fuel.

25 And I'm available for any questions.

1 Thank you.

2 MR. OLSON: Mr. Friedman, one question.
3 Tim Olson here. Is there a potential for more
4 growth in the military here in California for
5 biodiesel use?

6 MR. FRIEDMAN: You know, we are starting
7 to do more research in actually using it in some
8 of our tactical equipment. So I think to the
9 extent that right now it's not in use in the
10 tactical equipment, there's certainly room for
11 growth.

12 I know on our actual installations we
13 are essentially max'd out because that is the fuel
14 that's being used.

15 I guess there's more potential use in
16 that once if we have vehicles that leave the base,
17 and have to get fueled in town, they're not being
18 fueled with biodiesel.

19 So I guess the caveat is we're only
20 using the biodiesel when we can actually fuel it
21 from our pump. So, to the extent that the
22 infrastructure expands beyond our installations,
23 then there is more opportunity for us to use it.

24 MR. WARD: Mr. Friedman, you mentioned
25 you're up to B-20. And many times the warranty

1 concerns are raised as why not going for B-5, the
2 engine manufacturers won't warranty.

3 Have you had breakdowns with your
4 equipment, or have you noticed any substandard
5 biodiesel or any problems that have resulted in
6 you going to B-20?

7 MR. FRIEDMAN: The only problems we have
8 had have been in some cold weather applications
9 and backup generators where the fuel sits. We
10 have not had any issues in just the normal routine
11 equipment that has a regular duty cycle.

12 I know, I mean I've been very involved
13 in this. I know there's stories out there from
14 cities that went immediately to B-100 and there
15 were problems with that.

16 But I think our operational people, from
17 what I understand, B-20 is a pretty optimal mix.
18 That outside of some isolated issues, you know,
19 especially out in our desert installations where
20 you have very cold winters, and you have
21 generators that are infrequently used. Other than
22 that I have not heard of any problems.

23 In fact, I think everyone is surprised
24 at how smooth the transition actually was when the
25 mandate came from Washington to go to B-20

1 exclusively on the installations. You know,
2 that's one thing you can say about the military,
3 when an order comes from headquarters everyone
4 does it.

5 And everyone did it and I think people
6 were expecting more problems. And the problems
7 just never happened.

8 MR. WARD: Thank you.

9 MR. FRIEDMAN: Thank you.

10 MR. OLSON: Very good, thank you. Tom
11 Fulks, you said you had a comment, just since
12 you're part of that industry he's raising this
13 question to.

14 MR. FULKS: Yeah, Tom Fulks, Diesel
15 Technology Forum. I did want to address the
16 question about retrofitting. And that is what Mr.
17 Friedman said is correct, there are no data right
18 now on the impact on retrofit after-treatment
19 systems from biodiesel.

20 One of the recommendations that you
21 could do is right now the Air Resources Board is
22 just in the beginning phases of a emissions study
23 for biodiesel, renewable diesel and some other
24 fuels.

25 And I know that this is strictly a

1 combustion emissions test. And I don't think
2 they've got any protocols established for impacts
3 on after-treatment systems. In fact, we asked
4 them to do this a year ago and I don't see that
5 happening. It may be a matter of funding.

6 But right now the emissions -- the
7 engines have not been fired up yet. This is down
8 at UC Riverside. And this is a really good
9 opportunity to study the impact of a B-5/B-20
10 blend on after-treatment systems if we could just
11 get them the funding to do it.

12 So, thanks.

13 MR. OLSON: Very good, thank you. We
14 have another speaker, Mike Eaves. Would you like
15 to come up, Mike. Introduce yourself and your
16 organization.

17 MR. EAVES: Thanks, Tim. I'm Mike Eaves
18 with the California Natural Gas Vehicle Coalition.
19 We would like to compliment staff and the
20 Commission for creating a transparent process to
21 gather the information and data. Our industry's
22 had a lot of good exchanges with staff; and staff
23 has come up with a rather bullish potential for
24 natural gas in the future that our industry agrees
25 with to some extent. And I'll tell you where we

1 disagree.

2 I'd like to chime in on Paul Wuebben's
3 comment regarding the accountability issue on the
4 plan. I was hoping, in chapter two, where it
5 lists the various agencies and their duties and
6 responsibilities, that there would potentially be
7 somebody identified as the lead agency to carry
8 things forward.

9 I think all of the elements in the plan;
10 I think we've had significant input to that. We
11 agree with a lot of the things in regards to
12 incentives and policies. But I think that
13 certainly the whole plan needs to have some
14 leadership.

15 The industry, natural gas vehicle
16 industry, does take exception to what is perceived
17 as the future role of light duty, natural gas
18 vehicles in the marketplace. Light duty NGVs are
19 defined for market niches only. And in the
20 technology assessment, chapter 5, NGVs are
21 forecasted to be potentially not viable in the
22 post-2020 timeframe, being displaced by P-ZEVs and
23 plug-in hybrids and fuel cell vehicles.

24 The analysis of cost effectiveness of
25 natural gas in table 12 on page 70 would indicate

1 natural gas because of economics has a long viable
2 future in the fuels business. But the technology
3 assessment in chapter 5 fails to consider that
4 natural gas vehicles can also adapt to hybrid and
5 plug-in hybrid technology.

6 I think it's interesting in the report
7 that the report implies that it's easier to solve
8 all the technical costs, performance, durability
9 and infrastructure issues of fuel cell vehicles
10 than it is for the natural gas vehicle industry to
11 increase O&M production availability of a cost
12 effective technology.

13 I think staff should correct the
14 perceptions about light duty, natural gas vehicles
15 being a niche market, and not being a significant
16 market beyond the 2020 timeframe.

17 There's also conflict in the
18 recommendations. If, or in fact the Commission
19 and the staff feels that light duty, natural gas
20 vehicles are not a viable option in the future,
21 there are significant recommendations for the
22 California Public Utilities Commission to grant
23 utilities ratebasing authority for home refueling
24 appliances and supporting RD&D for developing new
25 products for the markets.

1 And those recommendations would be
2 inconsistent with a staff recommendation that
3 light duty NGVs have no future in the market.

4 The last issue I'd like to address is
5 the lack of transparency in the economic
6 conclusions. There's no really record of the
7 assumptions in data and methodology used in the
8 report. We have had input obviously to staff on
9 the economics for natural gas vehicles, but I
10 can't go to that report and tease out any of the
11 economic assumptions that are used in there for
12 fuel cell vehicles, biodiesel, ethanol, whatever.

13 It's also disturbing that the most cost
14 effective fuel, based on table 12, has one of the
15 lowest fuel penetration goals while some of the
16 less cost effective fuels and technologies are
17 portrayed as having the highest market penetration
18 potential.

19 I think the lack of methodology and
20 assumptions makes it impossible to validate the
21 correctness of the market potentials for each
22 fuel. And we think that that deserves some
23 additional work by staff.

24 Any questions?

25 MR. OLSON: Thank you, Mike. I think on

1 the economic analysis we have lots of data
2 that's -- lots of the assumptions and lots of the
3 background stuff not in the report. We'll be glad
4 to provide that to you and maybe put it as an
5 appendices. It's already prepared, so all the
6 background is there.

7 MR. EAVES: Yeah, I think we were going
8 to suggest that that be maybe added to an
9 appendices because this is a significant policy
10 document that needs to have all those assumptions
11 noticed for the public.

12 MS. SHAPIRO: I agree.

13 MR. OLSON: Okay, the next card came
14 from Dave Modisette. Dave, would you come up,
15 introduce yourself.

16 MR. MODISETTE: Good afternoon, thank
17 you. Dave Modisette with the California Electric
18 Transportation Coalition. Really just one comment
19 for today, and that is that there is a great deal
20 of new work in this document. I think staff is to
21 be commended for that.

22 But as we tried to understand that work,
23 this week and over the weekend, we quickly
24 realized that we were not able to do that unless
25 we fully understand the assumptions and the values

1 and the numbers that went into this new work.

2 And so over the weekend we did send a
3 specific data request to staff asking for, you
4 know, for that kind of information.

5 Just to put that in context, you know,
6 before this report came out, the last set of
7 documents were the so-called story line analyses
8 that Tim mentioned, or the scenario analyses. And
9 we thought, at least in terms of electric
10 transportation, those were really excellent. They
11 were very very good. We worked with staff to
12 understand the assumptions and the numbers behind
13 those.

14 But when we got this document we quickly
15 realized that the numbers did not flow through
16 from that story line. The numbers are different,
17 at least some of the assumptions are different.

18 So, now we're kind of back in the
19 position of having to go back and say, gosh, you
20 know, now we need to know what these new
21 assumptions are so we can understand this work
22 before we can even comment on it.

23 So if it's possible to get that to us
24 soon so that we can incorporate that in our
25 comments, that'll be very helpful. I'm a little

1 worried that it may not be possible to do that in
2 time, so if it is possible to have a little more
3 time, as additional week or so, so that we can get
4 that assumption information from staff,
5 incorporate it into our comments, that would be
6 very very helpful.

7 Thank you very much.

8 MS. SHAPIRO: Thanks, Dave.

9 MR. OLSON: Okay, and Todd Campbell,
10 next speaker.

11 MR. CAMPBELL: Good afternoon; Todd
12 Campbell, Policy Director for Clean Energy. And I
13 just had a couple comments following upon Mr.
14 Eaves' comments from the California National Gas
15 Vehicle Coalition. I wanted to give you a
16 perspective at least from a fuel provider in the
17 natural gas vehicle industry.

18 First, I'd like to say thank you to
19 staff for doing a herculean task. It's a huge
20 effort. And they should be commended. Nothing
21 that they could ever pull together would be
22 perfect. And I certainly recognize that. And
23 under the time constraints I think that they did a
24 good job.

25 That said, you know, we have some

1 concerns and that's the purpose of the workshop is
2 to try to flesh out where we have issues.

3 We do think the recognition that
4 alternative fuels are needed to displace petroleum
5 clearly I think the state goals are fairly clear.
6 I even want to say that Ms. Brown is very correct
7 with AB-1007, under section 43866(b)(1) it clearly
8 states that the bill is to optimize the
9 environmental and public health benefits of
10 alternative fuels including, but not limited to,
11 reductions in criteria air pollutants, greenhouse
12 gases and water pollutants consistent with
13 existing or future state regulations in the most
14 cost effective manner possible.

15 And being good friends with the author
16 of this bill and her subsequent bills of AB-32, as
17 well as her other bill dealing with greenhouse
18 gases, I think this would be very consistent to
19 include the low carbon fuel standard.

20 I also wanted to kind of pump my fuel,
21 obviously, being a natural gas provider. One
22 thing that I'm very proud to have left the
23 environmental community and joined Clean Energy is
24 that natural gas has been a fuel that has been
25 able to push the limits for California.

1 It has substantially reduced emissions,
2 not only for heavy duty engines, achieving a 2010
3 certification standard this year, but for example,
4 the Honda Civic GX has been the greenest car
5 rating by ACEEE since I think 2001.

6 That is certainly going to meet one of
7 the goals that the state is looking for. And I
8 think when Mr. Wuebben commented on, or had some
9 concerns about our quality, one of the things that
10 Mr. Olson was showing or demonstrating in terms of
11 the goals for the plan was petroleum reduction,
12 bioenergy action plan and greenhouse gas
13 reductions. And the fact that there's the
14 criteria air pollutants aren't there probably is
15 the sensitivity.

16 But I think that being someone who lives
17 in the South Coast Air Basin and is concerned
18 about many other regions falling out of attainment
19 I think that certainly it was the intent of staff
20 to make this a prominent goal, and if we need to
21 make it more prominent, then we should.

22 In terms of petroleum displacement,
23 certainly natural gas achieves this. One thing
24 that's, I think, really important is recognizing
25 the economic impacts of not doing something about

1 displacing petroleum.

2 We're already about 854,000 barrels per
3 day shortfall globally in terms of production.
4 And that's a per-day figure. And that's just
5 between August 06 to August 07. So clearly, we
6 need to do something to displace oil. And
7 certainly this plan is trying to achieve just
8 that.

9 And then in terms of greenhouse gas
10 reductions, natural gas not only produces, and
11 this report reflects that, the greenhouse gas
12 reductions inherent, but also the one thing it
13 doesn't do is really demonstrate the potential
14 that natural gas has in terms of a bridge to
15 biomethane. And that is a big concern, from my
16 perspective, because we've been working very very
17 hard at the federal level and Congress in the
18 energy bill to put in specific earmarks to advance
19 this industry.

20 We are making personal investments and
21 strategic alliances with other companies that are
22 currently invested in a biomethane future. And we
23 certainly want to -- we're not satisfied, I should
24 say, with just being 23 or 30 percent reduction,
25 or achieving that kind of a reduction with

1 greenhouse gases. We want to bring you more
2 reductions.

3 And that's why we're actually very
4 ambitious in terms of trying to figure out how we
5 can make biomethane a part of our portfolio to
6 help out California achieve its greenhouse gas
7 goals.

8 Furthermore, to Mike's point about light
9 duty vehicles, we really think there is greater
10 potential. And Germany is a perfect example. In
11 the last six years they have gone from 100 natural
12 gas stations to next year they'll achieve 1000
13 natural gas stations.

14 In fact, last week Mercedes Benz just
15 announced they would launch their B class natural
16 gas vehicle, which is another model. This is one
17 of, I think, 17 models in Europe that actually are
18 all light duty vehicles. And they are technology
19 that we just need to send the policy signals to
20 get them to California.

21 So, the way that we work our model is we
22 basically focus on centralized fleets and high
23 volume fleets. But that gives us the opportunity
24 to provide public access and create the
25 infrastructure necessary for light duty vehicles.

1 And we've been very successful achieving about 24
2 to 30 percent growth, depending on the year, for
3 the last five years. So, I think that's
4 important.

5 One other comment, and that is optics.
6 It was mentioned before that, you know, certain
7 things were in certain places for elected
8 officials or decisionmakers to read. One thing
9 certainly keeps catching my eye is the LNG
10 benefits, or liquified natural gas benefits, for
11 greenhouse gas reductions.

12 And I say this because again our company
13 is committed to reducing greenhouse gases in the
14 State of California. We don't take offshore LNG.
15 We actually invested over \$80 million to build a
16 liquified natural gas plant in Modesto -- I'm
17 sorry, in the Mojave Desert. And that is
18 specifically to support the port operations in
19 Long Beach and Los Angeles.

20 So, if there's a way to show LNG import
21 and LNG domestic so that it's less confusing for
22 elected officials, that would be greatly
23 appreciated.

24 And we also certainly support the heavy
25 duty penetration numbers that were put out by the

1 agency. We think that the ports are going to be
2 just the first step. But we see that this
3 industry, especially the heavy duty market and the
4 medium duty market, to be a very huge potential
5 for natural gas vehicles, since they not only have
6 greenhouse gas reduction benefits, but also
7 criteria air pollutant benefits.

8 And with that I just wanted to conclude
9 by saying that I agree with Mr. Wuebben's point
10 about having more direction for the state to
11 achieve certain goals. It would just fill out the
12 plan. Because I think it has such a good body and
13 great potential, the fact that you have some
14 strong policy recommendations, and tie in some
15 implementation would make that a more complete
16 plan.

17 But my last point would be, I just want
18 to thank staff for working as hard as they have
19 been. I know that they've had tremendous time
20 constraints, and I think that they've done a great
21 job. And I hope my comments have been helpful.

22 MR. OLSON: Thank you very much.

23 MS. SHAPIRO: Thank you.

24 MR. OLSON: Okay, another blue card from
25 Kate Horner, Friends of the Earth. Would you come

1 up, Kate.

2 MS. HORNER: Kate Horner, Friends of the
3 Earth. We'd first like to appreciate all of the
4 work that has gone into producing this report,
5 given the multiple policy objectives, and just a
6 few broad comments.

7 Firstly, and I think this has been
8 stated once before, is that the report doesn't
9 seem to make clear what the guiding environmental
10 standard is. In the abstract it's stated the
11 significant -- without causing significant
12 environmental degradation, which doesn't really
13 match up that well with the statute language of no
14 net material increase.

15 So we would request that the CEC really
16 clearly articulate that alternative fuels can be
17 increased and promoted without any net material
18 increase. And that that is portrayed consistently
19 throughout the report.

20 Additionally, I don't think that the
21 challenge of meeting the GHG and petroleum
22 reduction goals in a manner that doesn't cause
23 environmental harm is really fully addressed in
24 the report. I think it's only mentioned in a
25 cursory fashion. And it does need to be applied

1 more broadly than the current narrow action item
2 under biodiesel near-term actions. I think that's
3 on page 16.

4 In general I think the report tends to
5 overestimate the ability of alternative fuels to
6 meet 1007 goals without environmental harm. On
7 page 54 it states that all three of the examples
8 meet objectives without adversely affecting
9 environmental and multimedia impacts. And there's
10 really no technical basis to look to, to make that
11 claim.

12 A lot of the agricultural impacts of
13 biofuels productions were not fully assessed in
14 the well-to-wheels report. So I think that that
15 is a little over-ambitious.

16 And additionally, I think that it would
17 be used for the report to be really clear when
18 they're talking about the broader sustainability
19 provisions associated with soil, health and
20 quality and water pollution versus the carbon
21 accounting and quantification from land use and
22 land use change.

23 And I think that's another clarification
24 that could be further elaborated in the report,
25 that land use and the intensive agricultural

1 production is actually very different from the
2 conversion of high carbon stock areas to
3 agricultural producing areas.

4 So those are a couple of points of
5 clarification that I think would help the state in
6 identifying what the parameters are for biofuel
7 production that wouldn't cause environmental
8 degradation.

9 And just lastly we would reiterate the
10 request for transparency in the document about
11 what the assumptions are, especially in the cost
12 effectiveness section. And we would appreciate
13 that that be included as an appendix, as well.

14 I think that's it.

15 MR. OLSON: Very good, thank you for
16 your comments.

17 Tim Carmichael.

18 MR. CARMICHAEL: Good afternoon. Tim
19 Carmichael with the Coalition for Clean Air. I
20 also wanted to thank all the staff for the work
21 they put into this report.

22 First thought is we echo the comments
23 made by several people before us that more time to
24 comment in writing would be helpful. And we would
25 request two more weeks beyond this Friday.

1 We will be submitting written comments.
2 You may have already received, and I expect you
3 will receive, comments from individual and
4 probably group comments from some of our
5 organizations.

6 One of the points that I want to echo
7 and highlight today is that on page -- I had it
8 just a second ago -- the summary of the -- sorry,
9 just give me a second here.

10 (Pause.)

11 MR. CARMICHAEL: Oh, page 9 and 10 where
12 it's just an attempt to summarize one of the key
13 elements of this alternative fuels strategy. You
14 will be hearing from the environmental community
15 that we believe there's at least one key element
16 that's missing, and that has to do with insuring
17 that there's adequate alternative fuel
18 infrastructure. And that is not capture in these
19 four points. And from our perspective it's just
20 as important as the four that have been listed
21 here.

22 Another point I want to make relates to
23 the state implementation plan for air quality. A
24 few people have commented that AB-1007
25 establishes, arguably somewhat murky, but at least

1 it establishes a floor for, you know, no net
2 increase in criteria pollutants, or no significant
3 degradation in air quality, which we obviously
4 appreciate.

5 But in the broader context of what this
6 agency -- both of these agencies, CEC and ARB, are
7 contending with, you have to consider how this is
8 going to interplay with the SIP. And I actually
9 think the report would be strengthened by a
10 discussion of that.

11 What would the beneficial impacts be of
12 this successful plan on the state implementation
13 plan for air quality, as it is today. And some of
14 us have been working on this all year. The state
15 implementation plan remains half undefined for
16 smog and for ozone. And we see alternative fuels
17 and technologies playing a key role in defining or
18 fulfilling that part that's undefined. I think it
19 would be a good idea, for many reasons, to speak
20 to that a bit in the report.

21 In the section on government actions,
22 pages 11, 12, 13, I appreciate this because
23 there's an attempt to present some accountability.
24 Who needs to do what. And there are a couple
25 places where the report actually says by when.

1 But there's only a couple of places where it says
2 by when.

3 We believe that every item on this list,
4 frankly, should have a date, you know, action no
5 later than. And if it's a year, that seems
6 reasonable, given, you know, the rest of the
7 specificity in the report.

8 But that will give not only these two
9 agencies, but everybody else that's tracking this,
10 a gauge. Are we on track here.

11 And for each of these elements, you
12 know, we contend with this in the state
13 implementation plan. The more specificity that
14 you can put in for each of these action items, the
15 better the plan will be.

16 My last comment is a reality check. It
17 is possible that the vision that's laid out in
18 this plan will not be realized in the future.
19 It's possible that one of the alternative fuels
20 won't deliver as we all hope it will, or a
21 industry or the vehicle provider or otherwise
22 don't deliver as anticipated. Whether they invest
23 significant amounts of money or not.

24 And I'm obviously saying it is possible,
25 tongue-in-cheek, because frankly it's likely that

1 some of this will not pan out as we all hope it
2 will.

3 Given that, it makes contingency
4 measures essential. And there needs to be some
5 discussion of the what-if for the state. If by a
6 certain date, or certain milestone dates, certain
7 things haven't happened with the fuel industry or
8 the vehicle industry, the state will need to do X,
9 or consider X.

10 And, you know, from our perspective
11 that's where the potential for mandates, and
12 obviously greater investment in maybe incentive
13 money would go hand-in-hand with some mandates, or
14 predate some mandates. But there needs to be, you
15 know, certainly a recognition of it, if not a
16 discussion of it, in the report.

17 A good plan always has some
18 contingencies. And that's what we encourage you
19 to include in the next draft of this.

20 Thank you very much.

21 MS. SHAPIRO: Thank you, Tim.

22 MR. OLSON: Are there other comments
23 here, anybody who hasn't had a chance to make a
24 comment? Yes, sir. Mark.

25 MR. SWEENEY: Yes, my name's Mark

1 Sweeney and I'm representing the California
2 Natural Gas Vehicle Coalition.

3 I just want to build off of a point that
4 Mike made earlier. One of the specific criterion
5 in AB-1007 is for the plan to minimize the
6 economic cost to the state. And I think when you
7 look at the examples in the report they consist of
8 a mix of very high market penetration of the least
9 cost effective fuels and the highest cost fuels in
10 comparison to having a higher market penetration
11 of lower cost, more cost effective fuels that have
12 faster payback periods.

13 And when you look at the cost
14 information and the payback information on pages
15 65 and 70 of the report, you'll see that the fuels
16 that are in your examples that are most successful
17 in your report are among the highest cost of the
18 alternatives.

19 And you've recognized before that the
20 intention isn't picking winners; that the
21 marketplace is what will eventually determine what
22 succeeds and what doesn't.

23 And I would ask you to reconsider
24 whether or not it makes sense to assume that you
25 have a very significant market penetration of

1 relatively noncompetitive technologies; a low
2 market penetration of the most economically
3 advantageous technologies.

4 And then I would also ask you to think
5 about whether or not that kind of formulation
6 really satisfies the requirement in AB-1007 that
7 the plan minimizes economic cost of the state.

8 Thank you.

9 MR. OLSON: Okay, very good. Any other
10 comments from the audience? How about on the
11 phone, any other comments on the phone?

12 MR. ALVAREZ: (inaudible).

13 MR. OLSON: Yeah, could you state your
14 name and affiliation, please.

15 MR. ALVAREZ: Of course, yeah. My name
16 is John Alvarez; I'm with (inaudible) Chevron, a
17 joint venture (inaudible) Chevron in California to
18 develop gas-to-liquid worldwide. As I've been
19 waiting for my chance to speak, I guess I've heard
20 mention of what I wanted to say already being
21 said. So I'll be very brief to try to get right
22 to the point here.

23 I guess I also, as some of the previous
24 commenters, was surprised when the executive
25 summary said that XTLs were going to be left out

1 because it was deemed to be economically
2 challenged and everything. And with the extensive
3 development of GTL happening now worldwide. That
4 seemed a rather astonishing statement to make.

5 I think that certainly the technology
6 GTL is commercial today. Also I was surprised to
7 see the statement that GTL was considered to have,
8 to be negative with respect to greenhouse gases.
9 There were several -- studies that were widely
10 peer reviewed did not agree on the fact that it
11 was neutral to slightly positive.

12 And so I've looked at the figures that
13 the staff seem to be using. I think that there
14 were just tiny differences that were being focused
15 on there that -- I know I've heard the (inaudible)
16 describing those kinds of differences as being
17 really well beneath the margin of error.

18 But in other studies I've seen there's a
19 real contradiction to that. If anything, the
20 differences tend to be on the positive side, in
21 the other direction. So I really think that that
22 conclusion is in error with respect to GTL.

23 (inaudible) representatives stated
24 earlier a really strong proven reg for greenhouse
25 gas reduction, as the Europeans can certainly

1 attest. And that if GTLs can help reduce
2 emissions there are no expense to greenhouse
3 gases.

4 Another (inaudible) reports and reports
5 from the -- groups, but have actually (inaudible)
6 conclusion in terms of the Energy Commission. I
7 guess I was a little bit surprised that this draft
8 report seems to neglect that body of work.

9 So thank you for the chance to comment.
10 That's all I have to say.

11 MR. OLSON: Thank you, John. Could you
12 supply the references for those independent
13 studies?

14 MR. ALVAREZ: Certainly, yes. To whom
15 should I address them?

16 MR. OLSON: You can address them to me.
17 Tim Olson. And my contact information is on that
18 PowerPoint presentation.

19 MR. ALVAREZ: (inaudible).

20 MR. OLSON: I'd also like to know this:
21 Is you company or your partnership planning to
22 deliver GTL to California? Sell it here?

23 MR. ALVAREZ: There's a possibility
24 (inaudible) plans at this time. I think that
25 (inaudible) demand and just that would be a

1 possibility in the longer term. But there's no
2 fixed plans for that at this time.

3 In Germany, obviously, there are
4 (inaudible) we're looking at our highest margin
5 market. And currently the European market is very
6 strong (inaudible) opportunities for most
7 producers.

8 MR. OLSON: Very good. Appreciate your
9 comments.

10 MR. ALVAREZ: I'll send you those
11 references.

12 MR. OLSON: Thank you. Any other --
13 anybody else on the phone? Let's go first with
14 Bonnie, do you want to go ahead? Introduce
15 yourself.

16 MS. HOLMES-GEN: Bonnie Holmes-Gen with
17 the American Lung Association of California. And
18 just a brief comment.

19 We are going to also be joining comments
20 with other environmental health stakeholders on
21 this plan. And we would appreciate also the
22 additional time, another two weeks, to put those
23 comments together. So we would encourage you to
24 extend that timeframe.

25 But just wanted to comment that the

1 American Lung Association has been very concerned
2 that the state make the simultaneous achievement
3 of our air quality criteria air pollutant goals
4 and the greenhouse gas reduction goals a top
5 priority.

6 And that in everything, all the plans
7 that are put together, and the implementation
8 efforts that we are stressing both the need to
9 reduce criteria air pollutants and achieve our
10 state and federal air quality goals as a key
11 priority, along with greenhouse gas reduction.

12 And there have been several comments
13 along that regard, but I just wanted to comment
14 that that has also been a key concern of the
15 American Lung Association.

16 And we do believe that -- we would
17 appreciate if you could edit the report to make
18 sure that the air quality goals are more front and
19 center. And I think, as was mentioned earlier,
20 along with greenhouse gas reduction and the
21 instate biofuels plan and some of these other key
22 priorities that are mentioned, that there could be
23 a much more significant discussion of the need for
24 the alternative fuels plan to support and enhance
25 the state's air quality improvement efforts.

1 And it would be helpful to have a little
2 more discussion of some of the challenges that
3 some of these fuels are facing with regard to
4 contributing to our air quality improvement
5 efforts.

6 Clearly there are studies going on, as
7 has been mentioned, at the Air Resources Board and
8 other places that are looking at biofuels, for
9 example. And looking at some of the mitigation
10 that will be needed to occur in order to insure
11 those biofuels blends don't worsen air quality.

12 And I think that the report should
13 present a little more information about some of
14 those challenges that need to be overcome before
15 making blanket statements that there is no
16 significant environmental degradation from all
17 these fuel blends that are mentioned in the
18 report.

19 And just the other comment that we also
20 agree that this plan is extremely important, and
21 we are really pleased with the tremendous effort
22 and work and energy that went into this. But we
23 would also agree there's a much -- there's a great
24 need for specificity in the timeframes, especially
25 the need for timeframes for state government

1 action to make these petroleum reduction efforts a
2 reality.

3 And so we will be submitting comments
4 along those lines, also.

5 Thank you for the opportunity to
6 comment.

7 MR. OLSON: Okay. Cece, do you have
8 another person online? So we have another person
9 on the line. Please introduce yourself.

10 MR. STONE: Garrett Stone from Aspire
11 Corporation.

12 MR. OLSON: Go ahead, Garrett.

13 MR. STONE: Thank you, Tim. I just
14 wanted to make a very short point, all the way
15 back to support, really, for the point of view
16 that Tom Fulks mentioned about biodiesel. And I'm
17 just going to mention some numbers, a simple
18 little math example.

19 And generate two columns for people who
20 are taking notes. Just like four or five elements
21 in each column. The left-hand one is biodiesel,
22 and the right-hand one is ethanol.

23 We use about 4 billion gallons of diesel
24 and about 16 billion of ethanol. If we use -- and
25 I'm just going to use some assumptions without

1 working here to make the case for any of them,
2 just I believe these are consensus assumptions.
3 And certainly the gentleman from the Navy
4 certainly gave a supporting point of view to B-20
5 being useful in the present fleet.

6 Where I'm going with this is to show the
7 opportunity, really, with the present fleet. As I
8 understand it, in the automotive side you can use
9 up to 10 percent of ethanol. So if you use an E-
10 10 blend in 16 billion, obviously you get 1.6
11 billion gallons of ethanol. And correspondingly
12 the B-20 would give you 800 million gallons of
13 biodiesel.

14 And so that's interesting because that
15 shows there's really just a two-to-one ratio, not
16 a niche amount at all.

17 But I want to go one step further, which
18 is the GHG reduction opportunity. And, again, I
19 don't want to prejudge the whole matrix which is
20 used in the GREET model for the LCFS effort that's
21 ongoing.

22 But just to reach out for some numbers
23 that I'm familiar with, for instance Professor
24 Farrell just last week was quoted as saying that
25 for corn-based ethanol the GHG reduction number,

1 they quoted him as saying 13 percent. So I'm
2 going to multiply that by the 1.6 billion. And I
3 just get a metric number of .21 if I do that.

4 But on the other hand, soybean-based
5 biodiesel is a much greater greenhouse gas
6 reduction. And a lot of people believe that's
7 around 41 percent. If you use that number, you
8 get a metric of .33. And those are just metric
9 numbers, although the mathematical approach, I
10 believe, is actually accurate and true.

11 The point being that if we just replace
12 the biodiesel opportunity compared to the ethanol
13 opportunity in the present fleet, it's a 50
14 percent greater reduction of greenhouse gases on
15 the biodiesel side.

16 So I just wanted to put that point out
17 there, that little math example, because it's the
18 kind of thing that I think that we should draw the
19 attention to policymakers to.

20 Thank you.

21 MR. OLSON: Okay, thank you, Garrett.
22 Just another point, as Mike Jackson pointed out
23 earlier, we used the -- in all of the biofuels,
24 ethanol analysis, a range of -- midwest corn was
25 the biggest environmental footprint. And then we

1 used cellulose as the smallest one. So there's a
2 range on the ethanol.

3 MR. STONE: Right, yes.

4 MR. OLSON: Very good. Anybody else on
5 the phone who wants to speak? Anybody else in the
6 room? Jamie.

7 MS. KNAPP: Tim and colleagues, thank
8 you for the opportunity to speak. I'm Jamie
9 Knapp, J.Knapp Communications. I work with a
10 coalition of environmental groups, many of whom
11 you've heard from today. More you will continue
12 to hear from in the next, we hope, a couple of
13 weeks, as opposed to a few days.

14 I'm not going to reiterate what you've
15 heard today, but I'm going to just add a couple of
16 quick things.

17 In asking for a little more time to
18 provide some, I think, reasonable and helpful
19 input to you, I'd just point out that this has
20 been a process that's been underway for a year and
21 a half. And we saw the report that distills all
22 this information a week ago. And so that does not
23 give us a lot of time to really grasp what has
24 been coming down over the last year and a half.
25 And so I would again reiterate a request for a

1 little bit more time.

2 But then that also connects to what Dave
3 Modisette said earlier about trying to get a sense
4 of the analysis behind some of what is in this
5 report because it doesn't all seem to connect, and
6 it is hard to get a sense of some of the
7 statements that are in the report, and exactly
8 what piece of analysis they are relating to.

9 Lack of references, sources that would
10 be very helpful to see what some of those
11 assumptions are. I know you're trying to make a
12 short and succinct report, but something got lost
13 in the translation there.

14 Some of the information, I suspect,
15 comes from the scenario analysis. Now, I know
16 that David indicated it seemed like there was new
17 numbers with respect to the electric
18 transportation information that was in the report.
19 And that was different from what was in the
20 scenario analysis.

21 I don't even know that because I haven't
22 seen the electric transportation scenario
23 analysis. I've seen a couple of the scenarios,
24 that staff have sent to me, and that I have then
25 circulated to the individual members of the

1 environmental community. But I haven't seen all
2 of the scenario analyses.

3 And if they are specific, discrete
4 documents, we haven't seen them. I know that
5 there were parts of them and there was work that
6 was presented in some of the PowerPoint
7 presentations at the last workshop, but in terms
8 of the final scenario analyses, I don't even know.
9 Are they online? I looked online today and I
10 didn't see them. So that would be really helpful,
11 just to see all of the pieces that fit into this
12 report.

13 One other little piece of information,
14 October 24th is the low carbon fuel standard
15 workshop date?

16 MS. SHAPIRO: Um-hum.

17 MS. KNAPP: And I think that's in the
18 morning. So, I didn't know what time you were
19 planning to do your Committee workshop. So that
20 was just something I wanted to point out as a
21 potential conflict. I'm hoping that you're
22 coordinating on that.

23 And that's it, thank you.

24 MR. OLSON: Okay, Jamie, what we will --
25 a lot of the individual story lines are in our May

1 31st --

2 MS. KNAPP: But I know you made changes
3 to those, because --

4 MR. OLSON: We made changes and we'll be
5 glad --

6 MS. KNAPP: -- because stakeholders
7 provided comment on those. And I've seen one or
8 two of them, but I haven't seen all of them.

9 MR. OLSON: We'll get you the full
10 document. It's in one document now.

11 MS. KNAPP: Great.

12 MR. OLSON: And it has not been posted
13 on our website, but we'll distribute them.

14 MS. KNAPP: That'd be great. Thank you.

15 MR. OLSON: So, any other comments in
16 the audience here, participants? Any questions
17 from the Commissioner Advisors, management?

18 MS. BROWN: No. This is Susan Brown,
19 Advisor to Commissioner Boyd. I would like to
20 make a few comments, if I may.

21 I want to, first of all, on Commissioner
22 Boyd's behalf, thank you all for your
23 participation today. I think it's been very
24 useful and productive.

25 And we also need a little bit of time to

1 absorb what we've heard today, and kind of make a
2 determination of whether we need to issue an
3 errata or some other form in the report, and by
4 when.

5 So I will say this, we do have the date
6 for the Committee hearing involving Commissioners
7 Boyd and Byron, fixed for October 24th. And
8 that's going to be very difficult to move.

9 However, we will take back the request
10 for additional time and let the Commissioners
11 deliberate and decide how to move forward.

12 I would like to encourage Tim and his
13 group to release the underlying economic analysis
14 and story lines in their entirety as soon as
15 possible, but I am certainly not in the best
16 position to decide when that is.

17 And this request to see kind of how all
18 the pieces fit together appears reasonable to me.
19 But I think we need to deliberate a little bit
20 further internally before we set any more
21 deadlines for additional comment.

22 But, thank you. We have heard you. We
23 will take that back and discuss it with our
24 bosses, and get back to you in the next couple of
25 days, because we will be issuing a notice of the

1 workshop on October 24th.

2 So, Tim, do you want to comment further?
3 And Commissioner Byron's Advisor, Laurie.

4 MS. TEN HOPE: Just one request. When
5 you're issuing your comments, Tim, on slide 7, had
6 indicated that staff was putting forward some
7 potential goals that we might recommend to the
8 Governor and the Legislature.

9 We'd be interested in your comments on
10 those goals, if those are the appropriate goals to
11 put forward.

12 MS. BROWN: And I also want to encourage
13 the parties, to the extent possible, to file what
14 you can by Friday, because it will help to shape
15 the final outcome.

16 MR. OLSON: Yeah, Laurie ten Hope's
17 comments are this last bullet on this slide here,
18 establish goals to increase alternative fuels, 9
19 percent in 2012, 11 percent in 2017, 26 percent in
20 2022.

21 I guess we're gathering all this in, and
22 we're looking at -- we'll spend whatever time is
23 needed to make revisions, and maybe even in some
24 cases talk to some of the individual people. It
25 sounds like there are a couple pieces of new

1 information we didn't have before, or didn't
2 consider.

3 And so we're open to doing that in the
4 timeframe you have. And I guess we --

5 MS. SHAPIRO: Well, in the case of the
6 Navy, we have it, we just didn't put it in. So it
7 wasn't new, just we didn't put it in.

8 I wanted to say something. This
9 workshop today was a staff workshop. Your
10 comments came to us; the Advisors have heard them.
11 We are then going to the Commissioners, who you
12 are going to be able to speak to on the 24th.

13 So, I want to reiterate, anything that
14 you've told us today or can tell us by this Friday
15 will be very helpful in what we give to the
16 Commissioners so that they have a more full
17 picture. We don't have to say again, oops, we
18 left out the Navy's use of biodiesel, the main use
19 of biodiesel in the state.

20 So, comments by this Friday will be very
21 helpful. I know you need more time. It's not
22 going to be adopted till the end of October. The
23 Commissioners are going to hear it in a little bit
24 less than two weeks from now.

25 But don't hold off on making comments

1 thinking, oh, we'll get more time, we can do this.
2 Anything you can give us now or soon, by Friday,
3 will be very useful.

4 So, thank you. Thanks for coming, also.

5 MR. OLSON: Okay. If there are no other
6 comments then -- we have another on the line?

7 Another phone comment on the line.

8 So, go ahead; state your name and
9 affiliation, please.

10 MS. SHAPIRO: Hearing none, then let's
11 turn it off.

12 MS. STANEK: Thank you; this is Mary
13 Beth Stanek for General Motors. I joined late and
14 I apologize for that.

15 I just heard someone mention the goals
16 that will (inaudible). Can that be restated,
17 please? I'm in a public space where I couldn't
18 hear it very well.

19 MR. OLSON: Yes. This is Tim Olson at
20 the California Energy Commission. We are, after
21 going through this analysis, we've concluded that
22 we think that alternative fuels can achieve some
23 percent of overall, onroad, light duty, heavy duty
24 and some offroad market penetration.

25 In the year 2012, 9 percent; in the year

1 2017, 11 percent; and then in the year 2022, 26
2 percent.

3 A number of assumptions associated with
4 those goals.

5 MS. STANEK: Such as?

6 MR. OLSON: Well, --

7 MS. STANEK: I mean I just want to know
8 are we looking for like an E-10 in a flex fuel 85
9 blend, or are you encouraging mid-level blends?

10 MR. OLSON: Well, this assumes a mix of
11 several different alternative fuels, as described
12 in the AB-1007 report. And, in fact, there are
13 three kind of optional scenarios of exceptions.
14 Things that, kind of raising this what-if question
15 if something doesn't happen, what's the
16 replacement. That's why we have three different
17 examples.

18 And for the most part the key variables
19 are this: That federal incentives need to be
20 extended; that the State of California will need
21 to invest a significant amount of money, in the
22 range of \$100 million a year for 15 years, that's
23 what we're estimating to support alternative fuel
24 vehicle cost differential, infrastructure --
25 fueling infrastructure, maybe some supply.

1 And that we're assuming a high petroleum
2 and gasoline, diesel price forecast from now
3 through the year 2030. And that's equivalent to
4 the high DOE/EIA fuel price forecast.

5 And there are dozens of other
6 assumptions that are connected to this.

7 MS. STANEK: I think my main -- the real
8 question I had, Tim, I'm sorry I wasn't specific,
9 is a part of the assumptions, are you talking
10 about blend levels at the gas station above E-10
11 or E-85? Are you talking about E-15 or E-20?

12 MR. OLSON: Well, in one of the options
13 we're assuming that E-10 is a player in this. But
14 we're also looking at the option of
15 biohydrocarbons could be supplanting E-10 at some
16 point in time. Or that E-85 will have a
17 marketplace -- E-85 and FFVs will have a
18 significant role.

19 MS. STANEK: Okay, so I just want to
20 again -- making sure that we're working with ASTM-
21 approved fuels, E-10 and -- flexible vehicles,
22 and, you know, again, we're not looking at
23 changing the mix level in a different --

24 MR. OLSON: Yes.

25 MS. STANEK: (inaudible) comments to you

1 by Friday. Obviously that's not -- the mid-level
2 blends (inaudible) vehicle, and, you know, very
3 robust (inaudible) to occur on (inaudible) be
4 permissible?

5 MR. OLSON: Okay. That would be
6 helpful. Those kind of comments would be helpful.

7 MS. STANEK: Okay. To get them to your
8 attention, Tim; and then (inaudible) for the
9 Commissioners?

10 MR. OLSON: Either directly to me, or
11 you can put it right into our docket.

12 MS. STANEK: Okay. Thank you very much
13 for your time. Appreciate it.

14 MR. OLSON: Okay, thank you. Any other
15 comments?

16 Okay, I think that's it. Thank you very
17 much --

18 MS. SHAPIRO: Thank you, all, for
19 coming.

20 MS. BROWN: Thank you.

21 MR. OLSON: -- for coming. I'll let you
22 know.

23 (Whereupon, at 3:32 p.m., the Joint
24 Staff Workshop was adjourned.)

25 --o0o--

CERTIFICATE OF REPORTER

I, PETER PETTY, an Electronic Reporter, do hereby certify that I am a disinterested person herein; that I recorded the foregoing California Energy Commission Joint Staff Workshop; that it was thereafter transcribed into typewriting.

I further certify that I am not of counsel or attorney for any of the parties to said workshop, nor in any way interested in outcome of said workshop.

IN WITNESS WHEREOF, I have hereunto set my hand this 31st day of October, 2007.



PETER PETTY