

TRANSPORTATION POLICY COMMITTEE WORKSHOP
BEFORE THE
CALIFORNIA ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

In the Matter of:)
)
Informational Proceeding) Docket No.
and Preparation of the) 06-AFP-1
State Plan to Increase)
the Use of Alternative)
Transportation Fuels)

)

CALIFORNIA ENERGY COMMISSION
HEARING ROOM A
1516 NINTH STREET
SACRAMENTO, CALIFORNIA

WEDNESDAY, OCTOBER 24, 2007

1:00 P.M.

Reported by:
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CEC COMMISSIONERS PRESENT

James Boyd, Presiding Member

Jeffrey Byron, Associate Member

CARB STAFF PRESENT

Bob Fletcher, Division Chief

CEC ADVISORS PRESENT

Susan Brown

Gabriel Taylor

Peter Ward

CEC STAFF AND CONTRACTORS PRESENT

McKinley Addy

Michael D. Jackson, TIAX, LLC

Mike McCormick

Tim Olson

Diana Schwyser

Rosella Shapiro

ALSO PRESENT

Joe Sparano, Western States Petroleum Association

Tom Fulks, representing Neste Oil

David Modisette, California Electric
Transportation Coalition

Brent Riffel, Life Cycle Associates

Randal A. Friedman, Navy Region Southwest

Daniel Emmett, Energy Independence Now

Michael L. Eaves, California Natural Gas Vehicle
Coalition

Luke Tonachel, Natural Resources Defense Council

Paul Wuebben, South Coast Air Quality Management
District

Danielle Fugere, Friends of the Earth

Mark Sweeney, California National Gas Vehicle
Coalition

Jay McKeeman, California Independent Oil Marketers
Association

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1 P R O C E E D I N G S

2 1:10 p.m.

3 PRESIDING MEMBER BOYD: This is a
4 meeting, a workshop hosted by the Transportation
5 Committee of the California Energy Commission and
6 we are joined by our partners in this effort, the
7 California Air Resources Board. I understand
8 Mr. Fletcher will be here shortly but we're going
9 to start. I apologize for being a little late.

10 I'll make some introductory remarks and
11 ask Commissioner Byron who is the other member of
12 the Transportation Committee if he'd like to do
13 the same before starting this workshop.

14 I was late for a host of reasons, not
15 the least of which is the fire situation in
16 California. And I just want to have us all think
17 about that for a moment and think about the folks
18 facing an incredible, tragic situation down south.
19 It does cross over into our responsibilities with
20 regard to the delivery of electricity and I have
21 been on the phone all morning with the Nuclear
22 Regulatory Commission as we worry about how close
23 the fire has gotten to San Onofre and its
24 infrastructure. But all is well but it did jump
25 the road once. In any event it just does remind

1 us of what those folks are going through.

2 Commissioner Byron and I spent two days
3 and two nights in Rancho Bernardo along with other
4 people in the audience just a couple of weeks ago
5 and suddenly it's in the press all the time. I
6 have three or four now maybe siting cases in the
7 San Diego area, two of them very active, about an
8 hour to an hour and a half drive away from the San
9 Diego Airport, so lots of these communities that
10 are being mentioned are ones that I and my staff
11 and other Commissioners have driven through to go
12 to the sites of proposed power plants. It is
13 pretty awesome to think about what is going on
14 down there.

15 And there's actually even a slight
16 connection with this plan because some of us have
17 been trying to use forest waste biomass for years
18 and put it to good use. And I have made bad jokes
19 about burning it up in the meantime before the
20 Tahoe fire and now we have this. But in any event
21 I'm sure all of our thoughts are with those folks.

22 I want to thank the many, many
23 stakeholders, many of whom, some of whom anyway
24 are represented here, for their persistence in
25 providing input to this plan. And frankly their

1 patience as we've worked days, weeks and now
2 months to pull this plan together in what we have
3 before us, which is represented as the plan of the
4 Committee. Somewhat accurately and somewhat
5 inaccurately. I think the Committee reserves the
6 right of absorbing what everybody has to say today
7 before you really see the final Committee plan
8 that will be recommended to the full Commission.

9 But what we have before us is a
10 conceptual plan. It is responsive to the
11 requirements of AB 1007 which called upon us to
12 use a full fuel cycle analysis. It recommends
13 alternative fuel goals for the years specified in
14 the law, 2012, '17 and '22, and it meets the
15 requirements for recommending policies and
16 measures. It probably doesn't satisfy everybody
17 or anybody but that's how difficult it is to work
18 in this arena.

19 It is not really intended to be an
20 action plan like so many other action plans. And
21 people like to analogize this to the Air Quality
22 Program State Elimination Plans. They're prepared
23 by lots of agencies over long periods of time.
24 This is not quite similar. This plan is really to
25 provide the context for future state and private

1 sector actions to increase the use of alternative
2 renewable and low-carbon transportation fuels.

3 As part of this plan the Energy
4 Commission did, as I said before, complete a full
5 fuel cycle analysis, which helps support the ARB's
6 efforts. It has in the past and will in the
7 future, to establish the low-carbon fuel standard,
8 which the Governor directed.

9 It is interesting to note, an
10 observation that many of us have made, that as a
11 result of this full fuel cycle analysis, which is
12 an evolving science in and of itself, that all the
13 alternative fuels that -- almost all the
14 alternative fuels we talked about and analyzed in
15 our scenarios, are ten percent lower in terms of
16 their carbon content now. So if for no other
17 reason alternative fuels have definitely earned a
18 place in our future in this state.

19 The plan recognizes the need for market
20 incentives to bridge the gap between requirements
21 or mandates for fuel-specific actions that we may
22 take and other policy measures that may evolve
23 from this activity.

24 As the plan points out, the low-carbon
25 fuel standard alone cannot achieve the state's

1 policy objective in reducing petroleum dependance,
2 increasing in-state production of biofuels, or
3 curbing greenhouse gas emissions. Efforts,
4 actions and incentives will be needed to
5 complement the low-carbon fuel standard but not to
6 fund regulation compliance.

7 With the Governor's signing of AB 1118,
8 which some of us think is very fortuitous and
9 courageous, the Energy Commission and the Air
10 Resources Board are now in a better position to
11 develop a more specific plan on how the incentive
12 funding provided in the bill can best be directed
13 to meet the state's multiple policy goals.

14 We plan to move very quickly to form the
15 advisory body called upon in the law and to
16 develop the more detailed investment plan for
17 state incentives or state health and funding of
18 alternative fuels and vehicles to the extent this
19 is necessary.

20 Now I say this having just returned last
21 week from a several day meeting in Washington, a
22 conference where people from all over the country,
23 particularly purveyors of alternative fuels, made
24 it very clear they don't need government financial
25 help. So we'll see if what is said in Washington

1 is true in California. Usually it's the other way
2 around. What is said in California never gets
3 echoed in Washington and what we are able to do
4 seems impossible if not improbable when you get to
5 the East Coast.

6 The plan we think is a dynamic planning
7 document, which the Energy Commission intends to
8 update at regular intervals. In particular we
9 expect to update the analyses underlying the plan
10 on a two year cycle. Especially the full fuel
11 cycle analysis, which is integral for the low-
12 carbon fuel standard. And you can surmise from
13 what I said -- Obviously this activity somehow or
14 another, one way or another, will be integrated
15 into the Commission's Integrated Energy Policy
16 Report process, which we give a full-time,
17 continuous forum to all energy issues.

18 Today's workshop is the sixth, and I
19 note the last, in a series of public workshops
20 that have been helpful over the past year with key
21 stakeholders.

22 And I see Mr. Fletcher is here but I see
23 Mike Scheible hiding in the audience too. Mike,
24 you and Bob are both welcome to come sit here.
25 Try as you might to deny having anything to do

1 with this you're implicated. But in any event it
2 is good to see you here old friend.

3 The staff I know has held in excess of
4 50 individual meetings with stakeholders to
5 solicit input on the plan, so this is becoming
6 very much like creating an Integrated Energy
7 Policy Report in itself, in which another
8 Commissioner and I a couple of years ago sat
9 through in excess of 60 public meetings on the
10 topic. And who knows what will happen in the
11 future.

12 The staff has really tried to reach out
13 to everybody. In dealing with this very difficult
14 subject I think they have done an outstanding job.
15 We aren't exactly the -- We in government aren't
16 the largest agencies in California and it's a huge
17 burden on the staff to carry some of this out. I
18 appreciate all that they have done. I know
19 there's lots of blurry eyes in the audience from
20 the late hours that they have been keeping and the
21 weekends they have given up.

22 So we're going to hear from the staff on
23 a series of errata which attempt to address many
24 but I'm sure not all of the written comments that
25 they and we have received on the so-called

1 Committee Draft of the plan. Comments which were
2 received in the last two or three days are not yet
3 reflected but we will be considering additional
4 input in addition to them even today at this
5 workshop and we'll be putting out a final plan for
6 adoption by the full Commission on October 31,
7 which is just a week from today.

8 So the staff kept the doors open way
9 past the deadlines, which were impossible
10 deadlines for many of you, in an effort to try to
11 reflect as many of the comments that they could
12 into the errata that they are going to take us
13 through. And I know there is a commitment that
14 they may have other recommendations, we may have
15 recommendations today. Commissioner Byron and I
16 will undoubtedly have some reactions of our own
17 that we'll want to see reflected in the final
18 document that goes before the Commission next
19 week.

20 There is one point I want to, one issue
21 I want to bring up that I'm sure Tim and the staff
22 will go over that I have heard an awful lot about
23 in the several weeks that have passed since the
24 first draft of the plan went public. And that is
25 the fact that we are trying to clarify in the

1 final plan the intended purpose and use of the so-
2 called alternative fuel moderate case examples
3 that are discussed in Chapter 5 of the draft.

4 These case examples are not projections
5 and they don't reflect the policy preference for
6 any, single fuel or technology. They were
7 samples, examples, call them what you want, that
8 were done at a point in time. And we couldn't,
9 the staff couldn't do them all. Our contractor
10 couldn't do them all because he ran out of money
11 and we ran out of money, et cetera, et cetera.
12 They are just an effort to show some examples.

13 We are more interested in the fuel
14 scenarios to guide us where we need to go in the
15 future. But I don't want people to get wrapped
16 around the axle real bad that these so-called
17 examples are what exclusively are dictating what
18 the staff does, and more particularly what
19 Commissioner Byron and I do.

20 So with that I would like to invite my
21 Commissioner if he'd like to make some remarks and
22 then we'll turn it over to Tim Olson to take us
23 through the staff presentation.

24 ASSOCIATE MEMBER BYRON: Thank you,
25 Commissioner, I'll be very brief. The legislation

1 that precipitated this alternative transportation
2 fuel plan preceded me at the Commission but I have
3 seen the extraordinary efforts that have gone in
4 on the part of both the ARB and the Energy
5 Commission over the course of the past year or so
6 and certainly I have been party to providing the
7 direction on this report.

8 I am very appreciative of the interest
9 that we got on the part of all of you here today,
10 the folks that we have met with over the last
11 number of months. It is a very difficult and
12 challenging effort and I want to thank our
13 partners at the Air Resources Board in all of
14 this.

15 Again, we welcome your comments today.
16 I hope you'll be forthcoming. We are very
17 interested in what you have to say, both now and
18 in the writing. And I also would like to caution
19 you that if there is any crankiness coming from
20 the dais today I think it might be because of some
21 of these late nights that Commissioner Boyd has
22 been referring to on the part of the folks that
23 are up here.

24 Of course I am being facetious. We will
25 be as gracious as we can in hearing all your

1 comments. But folks have been up late, working
2 hard trying to finalize this report and get it
3 done so that we can get it in front of the
4 Commission. Already a little bit late but we
5 don't want to be any later than it's been. Jim,
6 do we --

7 PRESIDING MEMBER BOYD: Are you going to
8 correct my oversight in not introducing our staff?

9 ASSOCIATE MEMBER BYRON: Yes.

10 PRESIDING MEMBER BOYD: I think that's
11 where you were going. I was about ready to say
12 when you got done that I have committed an
13 oversight in not introducing the other folks
14 sitting up here. To my immediate right, Susan
15 Brown, my advisor, and to her right Peter Ward, my
16 other advisor. To Commissioner Byron's left is
17 his advisor, Gabe Taylor. If we can call you
18 Gabe, Gabriel.

19 And our special guest, Bob Fletcher of
20 the Air Resources Board. You're welcome to join
21 us. Because they are our full-fledged partners in
22 this whole arena. That was a giant system that we
23 all have to work on together. Thank you all for
24 being here.

25 I know all of you in addition to the

1 staff put lots of time into this effort. And
2 Commissioner Byron and I will be putting a lot of
3 time in it between now and next week but we in no
4 way can replicate the hours that the staff have
5 put in. So with that we can turn to Tim Olson who
6 will take us all through the errata.

7 Yes, Bob Fletcher, would you like to say
8 anything on behalf of the Air Board? I'm sorry.
9 I'm a little weary because I stayed up real late
10 last night studying this stuff.

11 DIVISION CHIEF FLETCHER: Just two quick
12 comments. One, you know, our thanks to the Energy
13 Commission folks who have worked really hard and
14 have worked very well with us to incorporate a lot
15 of the comments that we have and we really
16 appreciate that.

17 The second is one of the changes you'll
18 see throughout the erratas and addendums here has
19 to do with incorporating the air quality aspects.
20 These were comments that we heard at last week's
21 workshop and we have tried to incorporate that
22 kind of littered throughout the Executive Summary
23 and the report. So we have tried to be responsive
24 to that particular comment. That's it, thanks.

25 PRESIDING MEMBER BOYD: Thank you, Bob.

1 Tim, take it away.

2 MR. OLSON: Okay, thank you
3 Commissioners and Bob Fletcher. What I would like
4 to do is kind of walk, just refresh your memory a
5 little bit. I apologize, some of you have seen
6 part of this presentation before. I'll try to
7 move through it pretty quickly.

8 I'll describe a little bit of the
9 conclusions of the plan. Then we'll go into the
10 errata changes, additions, some of the comments.
11 At that point I am going to ask some of our staff
12 to come up to the table here and help respond to
13 your questions or any others in the audience.

14 We were receiving comments up until
15 actually this morning so we're still -- there may
16 be changes as of today, after today that you want
17 to consider.

18 So just to kind of refresh your memory.
19 Why are we doing this? This kind of convergence,
20 Commissioner Boyd, you mentioned, of these major
21 policy efforts. But to refresh what those are.
22 The petroleum reduction goals that were
23 established, adopted by both agencies, the Energy
24 Commission and the Air Board in the 22076 report
25 and established that kind of goal for the

1 petroleum reduction, 2020, 2030. And to our
2 knowledge that's what one of the stimulus of the
3 creating this AB 1007, what is the plan to then
4 implement those goals.

5 We also in the course of this a number
6 of things were happening in the Legislature and
7 Executive Orders that made this a little more
8 complex.

9 The introduction of the BioEnergy action
10 Plan. So not only increase alternative fuels but
11 also promote development of in-state biofuels.

12 And then we had these other factors that
13 came into the picture increasing the complexity of
14 the environmental impacts. And that was primarily
15 the AB 1493 Greenhouse Gas Emissions Standards,
16 the AB 32 Global Warming Act, Solutions Act. And
17 then an executive order, the Low-Carbon Fuel
18 Standard and the December, January 2007.

19 It made this whole thing more complex.
20 And our conclusion from this was that the actions
21 that we were looking at here need to consider all
22 of these, all of these policy mechanisms that it
23 becomes more of a multiple-policy objective in any
24 action.

25 Now can any single action address

1 everything? We found in our report in our
2 analysis, no they won't affect everything to the
3 same degree.

4 But the fact of the matter is that we
5 don't, we want to see all of the actions that are
6 proposed here, all the recommendations trying to
7 address multiple-policy goals and we think that
8 that's the trend for the future.

9 And, of course, we do not want to
10 retreat from what we've already accomplished in
11 reducing air, reducing criteria pollutants and
12 achieving some of the other reduction in toxics
13 and other multi-media factors.

14 So, just refreshing your memory. What
15 did the plan ask for? And it was to develop this
16 plan to increase alternative fuels. And we've
17 done that. We've described that in lots of detail
18 not only in this plan but companion documents that
19 outline how alternative fuels can increase in the
20 marketplace. The circumstances and conditions on
21 how that's going to happen.

22 And we also looked at the economics of
23 how that could happen. We also, for the first
24 time, as Commissioner Boyd, Commissioner Byron
25 noted, we're using this full-fuel cycle analysis

1 that was a key part of the requirements of the
2 legislation.

3 It's now the state-of-art analytical
4 approach for pretty much any fuel transportation
5 analysis. We will continue on in that. We're
6 going to try to improve that.

7 A key finding in the legislation or a
8 direction was that we, whatever action, whatever
9 plan goes forward there's got to be, it has to be
10 no-net-material increase in air pollution, water
11 pollution damage to human health.

12 We've pointed that out in a little more
13 detail in our errata and some of the additions to
14 the report.

15 Establish goals to increase alternative
16 fuels, 2012, 2017, 2022. In the course of doing
17 our analysis we felt that we needed to expand that
18 horizon to 2030, 2050.

19 You'll see later here, we're proposing
20 specific goals for those first three years, 2012,
21 2017, 2022.

22 This plan as legislation directed us to
23 do also required a series of things. Optimize the
24 environmental benefits. So meaning that's the
25 focus. How do you maximize getting those

1 benefits.

2 This is an issue raised in previous
3 workshops. Why are we considering greenhouse gas
4 emissions? And isn't this just the petroleum
5 reduction effort? No, it's a broad-based policy
6 effort. These things are required in the
7 legislation.

8 There is a series of requirements in the
9 law to look at the economics. We looked at this
10 from the standpoint of mixes of fuels, combined
11 mixes of fuels. Looking at the cost effectiveness
12 of the mix over time and optional mixes. And we
13 also looked at it from what's the impact of the
14 overall state economy?

15 We also incorporated into our work
16 information we gathered from surveys, primarily
17 fleet surveys but also information from some
18 consumer surveys.

19 Another requirement was identify the
20 barriers that we needed to look at recommend
21 policies and you see that throughout the report.

22 So the status, just kind of quickly go
23 through this. The big effort on the part of the
24 full fuel cycle analysis for those who may not
25 remember or didn't participate, that occurred from

1 around December 2006 through March, April. That
2 was adopted by the Energy Commission of the June
3 27 Business Meeting as the methodology, the
4 analysis that, we're using not only for this, but
5 recommending for the low-carbon fuel standard.
6 And it was used in developing the two University
7 of California, Davis, University of California,
8 Berkeley analysis for the low-carbon fuel
9 standard.

10 I want to also mention here there were
11 several documents created as feeder, we call them
12 companion documents, feeder documents, lots of
13 detail. All of them have been published on our
14 website.

15 Recently we combined them into, kind of
16 consolidated reports. We put those out. We're
17 planning to put those on our website as companion
18 documents that go with this report.

19 And that includes the story line
20 scenarios, lots of detail in each fuel, each
21 technology. The combined economic analysis and
22 all the background work on that. The biofuels
23 production report. And already on there is the
24 fleet survey report.

25 Also want to mention that we had in our

1 October 1st staff draft of this report or the
2 draft that we released October 1st had several
3 recommendations. You'll see in the errata and the
4 additions today there are other things that have
5 been proposed here.

6 And that draft plan with errata
7 additions is, if you don't have copies, they're on
8 the back table out in the front here. They're
9 also on our website. We're going to walk through
10 some of those in detail today.

11 So just to kind of refresh your memory
12 on what the plan's key conclusions are. Well as I
13 mentioned before no single policy action can
14 achieve the goals. And again, they're multiple
15 goals. We're expecting that as the report has
16 shown that some of these have greater petroleum
17 reductions benefits, some better greenhouse gas
18 emissions, some have a combined.

19 From what we are looking at in our
20 recommended actions there's no-net-material gain
21 in any of this environmental, air quality
22 degradation in any of the recommended actions that
23 we are taking per this proposal.

24 I want to point out that all this
25 analysis we did various scenarios and growth

1 rates. And we felt the most plausible is what we
2 call the moderate, growth scenario, alternative
3 fuel scenario that's described in detail in the
4 story lines.

5 We've taken that information and put it
6 into our main report and used that for across the
7 board, for every fuel, for every technology.
8 There is similar assumptions on fuel price
9 forecasts. Very similar assumptions on virtually
10 everything.

11 And what we found is that moderate
12 growth rate will meet the petroleum reduction
13 goals. It will meet the Bioenergy Action Plan
14 goals. And it will partially meet the greenhouse
15 gas emissions reduction goals which led to the
16 need, our need to describe how else we're going to
17 meet the greenhouse gas emissions reduction goals.

18 And that's the rationale for having the
19 2050 vision where we're bringing other areas of
20 actions beyond alternative fuels, fuel efficiency,
21 land use planning, that's described in the report.

22 So just to kind of reiterate
23 Commissioner Boyd's comment that we identified
24 several actions that could happen with each
25 alternative fuel in the story lines as if they

1 were operating on their own in the marketplace.

2 And then we took all that information
3 and put into a form in the main report to show,
4 okay there's a 100 percent of the market, what can
5 really happen to meet these goals?

6 And we did a very careful analysis of
7 how to attribute any growth out of that scenario,
8 out of the moderate growth scenarios for each fuel
9 and put them into an action plan that showed that
10 all alternative fuels are needed.

11 That there is significant growth from
12 each one of them. That there's a potential for
13 even greater growth, aggressive growth depending
14 on technology advances, investments, things that
15 are hard for us to predict today that might happen
16 20 years from now.

17 But there's room for growth for each one
18 of these. And that we also pointed out that and
19 heard from many of you that there were concerns or
20 some expectations that may not be met.
21 Particularly when you start looking beyond 2030
22 and trying to project what could happen there.

23 And that's what led us to do these
24 contingency examples which we refer to in the
25 report as example 1, 2, 3. And to show that what,

1 it's kind of a what if you, and the things that
2 we've concentrated on, what if hydrogen vehicle,
3 fuel cell vehicles cannot meet their cost targets
4 and cost reduction goals. What would you replace
5 it with? Or what would fill that gap?

6 We also asked another what if. What if
7 bio-hydro carbons don't materialize in the
8 marketplace? What would fill that gap?

9 Those examples that are contingencies
10 try to address those, what ifs. In addition, the
11 plan concludes that we need to extend federal
12 incentives across the board, tax credits, fuel
13 subsidies a full range of cost-sharing, type of
14 incentives.

15 A lot of the stakeholders that we talked
16 to felt that you got to have a long term plan on
17 that, not just two or three years but at least ten
18 years, and in some cases we heard a 20 years
19 extension of this.

20 We felt that in addition to that the
21 state of California needed to invest money in the
22 range of a 100 million to 200 million dollars per
23 year. We described it as a 100 million a year in
24 our report, kind of the low end. But we also set
25 it over a 15 year period.

1 This is similar to the AB 118 effort.
2 And very similar to the proposed appropriations
3 over but a shorter period of time, seven and a
4 half years.

5 We also felt that there would be a need
6 for market investment of at least a 100 billion
7 dollars. In my mind this is probably the more
8 conservative number. This could be double or
9 triple that depending on technology advance,
10 market penetration, investment by private
11 investment, lots of factors that could occur.

12 We also pointed out that, in the report,
13 that we felt lots of new private entrepreneurs
14 would go into this area. That this would be a in
15 addition to diversifying the fuel mix that we
16 would see a diversity in the corporate makeup of
17 the participants in this industry.

18 But a pretty, significant new player in
19 the electric drive area, specifically utilities,
20 municipal utilities and investor-owned utilities.

21 In our sum up in the cost effectiveness
22 we felt that the fuel mixes that we could think of
23 that give you the maximum environmental benefits
24 we felt as a mix, as a whole, would be cost
25 effective as early as 2015. It could be as late

1 as the time frame of 2030 to 2050 depending on
2 those maturity factors and other things I
3 mentioned.

4 We are recommending this last bullet
5 here recommending that the Commission in response
6 to the legislation establish these goals for
7 alternative fuels, nine percent of the
8 transportation fuel market in 2012, 11 percent in
9 2017 and 26 percent in 2022.

10 This fulfills the petroleum reduction
11 goals, the Bioenergy Action Plan goals and
12 partially meets the greenhouse gas emissions
13 reduction goals.

14 So just an overall summary of the errata
15 and additions we heard from several people
16 emphasize the importance of reducing criteria air
17 pollutants and other and make sure we're not
18 backsliding on any existing environmental laws and
19 standards.

20 We've had several additions to the
21 report to address that. We had some mistakes in
22 the future vision projections. We've corrected
23 that and you see a copy on the website. There's a
24 copy outside here in the front.

25 We had several comments to upgrade and

1 embellish the descriptions of the benefits, the
2 attributes and the challenges faced by each of the
3 fuels and technologies.

4 A lot of the effort went into upgrading
5 descriptions of biodiesel, renewable diesel, some
6 of the electric drive descriptions and some of the
7 XTL prospects and challenges.

8 But we, pretty across-the-board received
9 comments on this area and we've made several
10 changes.

11 We've added better descriptions into the
12 main report. This is recommended as part of the
13 addition package which is going to lengthen the
14 report but it gives a better description of each
15 of these fuels and technologies.

16 We also have made changes to highlight
17 the need for alternative fuel infrastructure.
18 We've been asked to provide the supporting
19 documents. We made that available. I mentioned
20 earlier, primarily the story line scenarios and
21 the economic analysis.

22 This last bullet specifies who does what
23 by when in the recommendations. We didn't do that
24 in any great detail. I think that's something
25 that we're going to recommend to the

1 Commissioners. There are some of these things
2 that probably could be specific dates and names of
3 organizations. But for the most part it's the
4 Energy Commission and the Air Board.

5 And some of this detail, I think, is
6 better put into the investment plans. For example
7 in the AB 118 Report and maybe other types of
8 development documents for the ARB's different
9 programs they are administering.

10 But we're open to those kinds of
11 suggestions. And then where we're going from
12 here. My understanding is that comments are due
13 on the revised draft plan today. We wanted them
14 to publish this report very soon and prior to
15 October 31. I don't know if we had set a date for
16 that a specific date but I suspect it's in the
17 next couple of days to make your final committee
18 draft plan available for the Commission adoption
19 on October 31, 2007.

20 And that's where we are on this. So at
21 this point our staff can come up and be available
22 to answer questions on either the errata, the
23 additions. We can go through each one of these
24 line-by-line or item-by-item if that's how you
25 want to do this. Or we can just respond to

1 questions that come up here from the people on the
2 phone or in the audience.

3 PRESIDING MEMBER BOYD: Well, I'm going
4 to leave that up to you Tim in terms of whether
5 you think you've made the stats case and just want
6 to absorb questions of concern. Or whether you
7 want to go in more depth on any of the particular
8 issues.

9 If you're comfortable then I'm prepared,
10 I think we're prepared to proceed to hear from the
11 public. Commissioner Byron reminded me we're
12 likely to hear some Halloween jokes (laughter).
13 So it's today.

14 MR. OLSON: So I think from our
15 standpoint we'd like to focus on the topics that
16 come up today as opposed to walking through every
17 single, there are about 95 different comments.

18 PRESIDING MEMBER BOYD: I was just
19 trying to keep you from talking long enough to
20 allow these people to have read the errata
21 (laughter) which I know unless they stayed up all
22 night they may have had a tough time with.

23 With that I'm prepared to hear from
24 folks in the audience. Please remember the
25 procedure of the Commission is that folks who want

1 to speak find themselves a blue card on the table
2 out there in the lobby, fill it out, give it to
3 any staff who will bring it up to us here and
4 we'll call on you.

5 But this being a workshop we're going to
6 be fairly informal and I'll be asking if everybody
7 has had a chance to say anything.

8 But I'm going to take the cards in the
9 order that they arrived up here And then throw the
10 floor open to any other folks.

11 The first blue card, the first speaker
12 is Joe Sparano of the Western States Petroleum
13 Association.

14 MR. SPARANO: Good afternoon
15 Commissioners. For the record, my name is Joe
16 Sparano. I'm here today representing the Western
17 States Petroleum Association. I've handed the
18 Commissioner and Mr. Fletcher copies of the
19 comments in total. I won't go through them all.
20 But I would like to make a few key points as we go
21 along and then respond to questions if there are
22 any.

23 I want to talk process first today.
24 Several comments were made about late nights and
25 people being pretty tired with the amount of

1 information that had to be developed. And Tim and
2 your group that's an awful lot of work that got
3 done in a relatively short period of time. And we
4 appreciate all that work that has been done.

5 It seems though on the last several
6 issues that have impacted our industry the staff
7 has worked for months and I think in the case of
8 the earlier IEPRs years. I remember testifying
9 here 40 or 50 times. And I think that was over
10 two years or more.

11 You get an enormous set of documents and
12 then because of the statutory time limit we get a
13 week or less to review them. And that's a broken
14 process. I don't know how to say it nicer or
15 smoother. And I don't mean disrespect. But I
16 think there has to be a way that the Commission
17 can address that so that and I have a staff of 14
18 including the Chief Operating Officer and me.

19 There's some folks in the audience who
20 have one or two people or themselves to crunch
21 through all of this. And I think there's a need
22 based on the seriousness of what we're about here
23 today and what you do everyday to address this
24 issue.

25 And I think while I have more words I

1 don't know that I have to say anymore than that.
2 I hope you appreciate the comment for the
3 constructive one that it is and we'll go on from
4 there.

5 Some general comments. In response to
6 the AB 1007 and the Energy Commission's 2003 and
7 2005 Integrated Energy Policy Reports, the
8 Governor directed the Energy Commission to take
9 the lead in developing a long-term plan to
10 increase alternative fuel use. I read that
11 because that's exactly how it appears in your
12 current draft of the alternative fuels plan.

13 Probably no surprise but WSPA still
14 feels strongly that forcing petroleum reduction as
15 a way to meet that goal somehow is far less
16 efficient than allowing ever-cleaner burning
17 petroleum products to continue being used and
18 having the increase, the addition of more diverse
19 products come from those that are scientifically
20 sound and cost effective and that are technically
21 feasible, that is, ready for prime time.

22 I recognize this is a bit of a different
23 philosophy. And we've talked about it a lot of
24 times. But I feel no less strongly today, four
25 years after I mentioned it for the first because I

1 think we have a great deal to offer in our
2 petroleum products and a willingness to continue
3 to making them cleaner. And to have as an
4 objective to rid the landscape of them which at
5 the end of the day you can extend the current
6 reduction idea to its end conclusion. That
7 doesn't seem to be particularly productive for any
8 of us.

9 We do think the AB 1007 plan is where
10 energy supply and air quality needs should meet.
11 And that the partnership between those elements
12 really is critical and will go a long way if we
13 handle it right to diversify California's
14 transportation fuels portfolio.

15 But that must be done in a way that
16 doesn't negatively impact either air quality or
17 the state's economy.

18 As Tim mentioned earlier, the AB 1007 is
19 directly linked to the low-carbon fuels standard
20 which in our view makes it even more important.

21 What is also important to us is the
22 assumptions used are reasonable. And that the
23 process design going forward improves upon the
24 knowledge base and tools needed to choose the best
25 fuels pathways to meet the goals.

1 Pathways that I mentioned earlier are
2 scientifically sound, technically feasible and
3 cost effective. I may repeat that several times
4 because of how important our industry thinks that
5 those principals are.

6 The plan in addition to increasing the
7 availability and use of alternative fuels has a
8 strong focus on satisfying multiple state policy
9 goals and objectives including reducing greenhouse
10 gas, increasing in-state production of biofuels
11 and meeting the low-carbon fuel standard.

12 WSPA as I know the Commissioners and Bob
13 Fletcher are aware is constructively engaged in
14 the low-carbon fuel standard and AB 32
15 implementation processes as are your agencies.

16 Our members are attempting to meet the
17 Governor's greenhouse gas emissions reduction
18 goals as ambitious as they are. But I would like
19 to mention that AB 1007 plan has multiple policy
20 objectives including but not limited to,
21 greenhouse gas emissions reductions and each of
22 them should be treated with equal importance even
23 though since this plan was requested I guess more
24 than a year or two ago there has been a tremendous
25 evolution of the state's effort to address

1 greenhouse gas emissions and their reduction and
2 to improve the carbon content of our fuels.

3 WSPA recommends the state develop a
4 clear and deliberate process using a dynamic
5 modelling tool whereby multiple alternative fuels
6 can be evaluated based on multiple state goals.

7 We think there are tools available and
8 understand that the CEC is pursuing this path and
9 we commend you for that.

10 WSPA agrees with the plans recommended
11 combination of regulations, incentives and market
12 investments in addition to vehicle efficiency
13 improvements and reductions in vehicle miles
14 travelled. But we advocate a stronger emphasis on
15 free-market mechanisms.

16 WSPA doesn't oppose well designed
17 incentives but we think the objectives should be
18 to insure that the incentives are structured to
19 create a climate more conducive to private
20 investment over the long term.

21 So say that with less words, don't pick
22 winners. And I know the agency has said
23 repeatedly that it's not about picking winners and
24 losers but incentivizing a select group of fuels
25 sure feels like some winners are out there.

1 And I think it's important to try to
2 step back and look at that as best you can and
3 insure that one fuel over another is not
4 advantaged before all the science and all the
5 technology is in.

6 I think that's about it. I want to
7 thank you for giving me a few minutes to share
8 WSPA's comments and would be happy to answer
9 questions.

10 PRESIDING MEMBER BOYD: Thank you Joe.
11 I know from your statement that you understand the
12 nexus between all these various goals and
13 objectives that you enumerated that seem to fall
14 beyond the scope of AB 1007 but as I've said and I
15 know the Legislature debated in passing the bill
16 by having us do a full fuel cycle analysis that
17 there was a recognition of all the environmental
18 including climate change ramifications of such a
19 plan.

20 So even though you observed we've gone
21 beyond the pale perhaps of what some believe is in
22 1007 I think you understand why we by necessity
23 have to take all these policies into
24 consideration. It's all part of one system. And
25 you can no longer make decisions on one narrow

1 issue without impacting the other issues.

2 And we have all discovered they're all
3 connected anyway. We see your dilemma. And I
4 trust you see our dilemma.

5 MR. SPARANO: Just an observation on
6 that. I want to make sure I didn't garble up the
7 message. We think it's very important that all of
8 the issues be addressed.

9 Our message here was, let's not give
10 overweight to those that have become the most
11 current and the most topical and let's make sure
12 that we still have that intense focus that you
13 started out with on fuel diversity. And that was
14 the message.

15 The full fuel cycle analysis I think is,
16 since you mentioned it Commissioner Boyd, is
17 probably the most important thing that we have to
18 do right. When you look at what's involved there
19 and the differences in models that are already out
20 there predicting carbon intensities for different
21 types of fuels, if we don't get that right we have
22 a very good chance of messing up our entire
23 economy by picking the wrong winners for the long
24 term.

25 And I think no one wants to do that.

1 But I wanted to respond to your point that it's
2 really, really critical that we do a terrific job
3 as best we can on the full fuel cycle analysis.

4 PRESIDING MEMBER BOYD: Well I think, in
5 fact, you acknowledged that we've continuously
6 reiterated that there is no single solution. I
7 think the term, silver bullet, has been used many
8 times. And the terms silver buckshot while
9 probably not originated in this form has also been
10 utilized many, many times.

11 And I think we all recognize that the
12 low-carbon fuel standard will be a major forcing
13 function in forcing market decisions on where we
14 go with fuels.

15 And I know you're sensitive to the issue
16 of forcing petroleum reduction in the face of the
17 world's cleanest burning gasoline being made
18 available by your folks but you do recognize that
19 both the president of the United States and the
20 Governor of this state repeatedly said we need to
21 reduce our dependence on petroleum.

22 So this plan has tried to take all those
23 objectives into account. And it doesn't pick
24 winners. But it starts to lay out a framework for
25 the future.

1 The other point that I made in my
2 opening remarks and I'm just taking advantage of
3 your comments to make all these comments is that
4 the passage of AB 118 and I'll address it in my
5 concluding remarks today again, but that just
6 opens another chapter in this continuing saga of
7 dealing with this subject.

8 And also provides a new and, as I
9 indicated before, seemingly probably continuing
10 forum for the discussion with regard to what the
11 fuel menu for the future might be and what the
12 marketplace which we're all depending on will
13 bring us.

14 And so you get to make another 50
15 appearances perhaps in the process of dealing with
16 that subject while making probably another 50
17 appearances down the street at the Air Resources
18 Board on the low-carbon fuel standard in AB 32.

19 But we will try to keep all these things
20 working together. Thank you. Commissioner Byron.

21 MR. SPARANO: Not to, I don't contend to
22 force the last word but you said something I
23 thought in there that was really important that
24 bears comment because it will come out otherwise
25 in what I've prepared.

1 When you look at the President and the
2 Governor asserting as is their privilege that we
3 should be less dependent on foreign imports and do
4 everything we can whether it's with conventional
5 fuels or with renewable or alternative fuels to
6 reduce that dependence something the Energy
7 Commission can do along with the Air Resources
8 Board is to make absolutely sure we don't work
9 ourselves into a position on implementing the low-
10 carbon fuel standard where we reduce the ability
11 to use heavy California crude or crude that may
12 come from tar sands in the area of responding to
13 carbon dioxide emissions and reducing those and
14 find ourselves exporting California crude and
15 importing even more foreign crude.

16 That is a logical and predictable
17 outcome if we're not careful. And I think none of
18 us wants that and the swellest part that you won't
19 be able to figure out what the Saudis or the
20 Iranians do as they're gauging how much carbon is
21 going up the flare when they flare the gases they
22 can't sell as they produce the crude.

23 So it's little things like that that are
24 really important when it comes to stirring all of
25 these together and creating what is on its way to

1 being a really, good alternative fuels plan.

2 PRESIDING MEMBER BOYD: Thank you.

3 MR. SPARANO: Commissioner I interrupted
4 you I'm sorry. Did you have a question?

5 PRESIDING MEMBER BOYD: No not at all.
6 Mr. Sparano thank you for being here. I noted
7 that you've got a number of additional comments
8 with regards to the low-carbon fuel standards and
9 market mechanisms and incentives.

10 In addition to the comments that you
11 provided on October 12th will we be receiving any
12 more from you by five p.m. this evening?

13 MR. SPARANO: If I can get my Blackberry
14 to work I might try to come up with a few. But I
15 think I've already --

16 PRESIDING MEMBER BOYD: Is this the
17 extent of your comments Mr. Sparano.

18 MR. SPARANO: -- I've worn out my
19 welcome already perhaps, so. I'll leave quietly.

20 PRESIDING MEMBER BOYD: This is it?

21 MR. SPARANO: Yes.

22 PRESIDING MEMBER BOYD: Thank you very
23 much.

24 MR. SPARANO: Thank you.

25 PRESIDING MEMBER BOYD: Next, Tom Fulks

1 representing Neste Oil. And I'm also aware that
2 we have people waiting on the phones. So after
3 taking care of some the blue cards I'll give the
4 people on the phone a crack at questions or
5 comments.

6 MR. FULKS: Commissioners Boyd,
7 Commissioner Byron, CEC staff, ARB staff, thank
8 you very much. My name is Tom Fulks. I'm here,
9 for the record, representing Neste Oil of Finland
10 which is a biomass-to-liquids diesel fuel
11 producer.

12 I also have to let you know that you
13 will be receiving comments, more comments that are
14 similar to this from the Robert Bosch Corporation
15 and from the Diesel Technology Forum, a different
16 version with different comments. But they are
17 more or less based on the same theme.

18 Those additional comments should be here
19 by Friday. As I mentioned at the last workshop
20 it's difficult to collect the sort of comments
21 from an association that's spread all over the
22 country. And so we're doing the best we can to
23 honor your deadlines. But I did want to give you
24 a heads up that that's coming.

25 Moreover, those comments will be, they

1 will not reflect the changes that have been made
2 and presented today, obviously. And so I just
3 definitely, take that in mind when you receive
4 them. That they're based on the original document
5 as presented at the last workshop and not today.

6 So with that preface I did want to thank
7 the staff very much for moving in the right
8 direction as far as we're concerned in terms of
9 acknowledging the role, light-duty diesel, heavy-
10 duty diesel and renewable diesel fuels will play
11 in the AB 1007 Report.

12 Last week we were very concerned because
13 it appeared that the role of renewable diesel was
14 more or less being ignored or shunted to the back
15 pages. And to borrow a term that I heard at the
16 last workshop it's the optics that matter. It is
17 the image that matters when reviewing a document
18 like this.

19 So I've just had a chance to glance over
20 some of the comments and without a doubt they are
21 going in the right direction.

22 The comments that Neste Oil has
23 submitted will, I won't go over them again because
24 they are now in the docket. They're with your
25 staff. And I think some of the comments in those

1 in that correspondence are reflected in this
2 document.

3 What concerns me is a matter that really
4 isn't the subject of today's discussion and that's
5 the 2007 IEPR because what you've got in the 2007
6 IEPR relative to this whole discussion is based on
7 the original version of the staff report for the
8 AB 1007 Report.

9 So I definitely would like, I don't know
10 where you are. Forgive me, I don't know where you
11 are in the process of the 2007 IEPR but I would
12 hope that the '07 IEPR would be amended to reflect
13 these changes that the staff has made for the AB
14 1007 Report.

15 Lastly, I did want to request that BTL
16 be treated separately from XTL in that, if you
17 take a look at the description in these amendments
18 of XTL, BTL which is a biomass-to-liquids fuel is
19 lumped in with coal-to-liquids and other what I
20 consider to be carbon-harsh technologies.

21 PRESIDING MEMBER BOYD: Are you afraid
22 of guilt by association (laughter)?

23 MR. FULKS: As I've said, it's image
24 that really matters. And when you lump in BTL for
25 those who may not know the real science behind it,

1 when you lump it in with a coal-to-liquids
2 technology it appears that BTL is just as un-
3 carbon friendly as those technologies. And I
4 would just respectfully request that somebody pull
5 BTL out and give it its own place. Or take it out
6 all together of the XTL category and just leave it
7 alone with what you've got under
8 biodiesel/renewable diesel. That BTL is a
9 renewable diesel fuel.

10 And so it doesn't necessarily need to
11 show up in two different categories. Especially
12 not with coal-to-liquid technology. It's just not
13 a good apples-to-apples comparison. When we're
14 talking about carbon and so forth.

15 Lastly, I wanted to bring to your
16 attention, again it's the image thing of this
17 sentence in the Executive Summary ES-6 that says,
18 flexible fuel, biofuel, plug-in hybrid electric
19 and fuel-cell vehicles will lead a wave of new
20 automobiles into the California market.

21 Of course, that's fantastic. And the
22 issue of light-duty diesel vehicles has been
23 addressed with a separate bullet in the amendments
24 that says light-duty diesel vehicles will enable
25 the use of renewable diesel and biodiesel in the

1 light-duty vehicle fleet.

2 That's all true. But in terms of the
3 volume and the near-term momentum in the
4 automotive market I would really like this report
5 to reflect the market reality of what's happening.
6 Just so that the credibility of the document
7 doesn't come into question somewhere down the
8 road.

9 The case in point is I was at the launch
10 of the Mercedes Benz E320 diesel bluetec product
11 last week down in LA. Tom Cackette of the Air
12 Resources Board was there as a featured speaker on
13 the stage during fashion week. Mercedes Benz has
14 now a California emissions compliant light-duty
15 diesel vehicle on the road.

16 My company plans at least two of them
17 next week. Two days later Audi had a tech day at
18 the German consulate, sponsored by the German
19 consulate in San Francisco. Audi is coming to
20 market with a series of diesel products led by the
21 Q7 which is the SUV version.

22 Volkswagen is coming to California with
23 a California emissions-compliant Jetta which is
24 the mid range in terms of size and cost. It comes
25 in at the mid 20s. Those will be coming in very

1 large volumes.

2 My point is these biofuel capable
3 vehicles will be at the forefront of these other
4 automotive technologies in probably greater volume
5 and much sooner on the calendar than many of the
6 others.

7 And because of the perception issue I
8 would like for that to be reflected in the tone of
9 the document so that light-duty diesel vehicles
10 aren't just considered capable of using biofuel.

11 But they will be here in very big
12 numbers. They're a very big petroleum reduction
13 tools. And they're also extremely capable of
14 using quality biodiesel and renewable diesel
15 fuels. That is with ASTM specifications that
16 everybody can agree to and that will not
17 compromise the integrity of the diesel,
18 petroleum/diesel fueling infrastructure which by
19 the way already exists.

20 I've mentioned this in the written
21 comments. The diesel infrastructure already
22 exists in at least 45 percent of all service
23 stations in California. And with properly quality
24 controlled renewable diesel or biodiesel fuel you
25 can use that infrastructure immediately with some

1 blend of biodiesel or renewable diesel.

2 So with that I'll let the written
3 comments speak for themselves. Please be
4 expecting more written comments that reflect these
5 same notions later on during this week.

6 And once again I would definitely like
7 to acknowledge the hard work of your staff and
8 recognize the changes in the document that have
9 been made in response to some of the comments that
10 we've already made.

11 We're not up here complaining. We're
12 simply trying to make you make your document
13 better and make it with, add a measure of
14 credibility so it doesn't come under attack from
15 my industry somewhere down the road. So thank
16 you. If you have any questions --

17 PRESIDING MEMBER BOYD: Thank you Tom.
18 I think you know how enthusiastic this agency is
19 about a cleaner-burning renewable diesels. I
20 think the one area where I have trouble is the
21 ability of our crystal ball to forecast any better
22 than anyone else's the reception that those light-
23 duty vehicles will get by the California consuming
24 public.

25 And so I think we will all sit and watch

1 whether these launches, how successful these
2 launches are in California. And I'll let it go at
3 that as to trying to guess the Californians point
4 of view about diesel vehicles.

5 There's been a long, cold winter for
6 light-duty diesels in California (laughter). And
7 I don't know if that generation has passed on and
8 there's a new generation that will have a better
9 view of the subject. But you could be right.

10 We're trying to do the best we can --

11 MR. FULKS: Well I won't I --

12 PRESIDING MEMBER BOYD: -- I think to
13 reflect reality without showing favoritism or
14 picking winners but --

15 MR. FULKS: Yeah, we --

16 PRESIDING MEMBER BOYD: -- we'll take
17 one, we'll look at the subject again and make sure
18 we're honest. That's all we want to be is fair
19 and honest and balanced in the way we talk about
20 things.

21 MR. FULKS: Well I appreciate that. And
22 we all wish we had a crystal ball as well.

23 Obviously the industry has a lot of proprietary
24 market research that is reflected in the product
25 announcements.

1 One of the things though anecdotally --

2 PRESIDING MEMBER BOYD: You mean it's
3 just not courage, I mean (laughter).

4 MR. FULKS: There is some measure of
5 courage but not much. You should really expect
6 that from the automotive industry as a whole.

7 PRESIDING MEMBER BOYD: I do know better
8 than that though (laughter).

9 MR. FULKS: Yeah, but if you take a look
10 at --

11 PRESIDING MEMBER BOYD: Twenty years
12 somewhere else talking back during --

13 MR. FULKS: -- I'll sit down quickly.
14 But if you take a look at, there's some, online if
15 you go to the various interest groups, user groups
16 and so forth. If you try to buy a used diesel
17 vehicle, smaller used diesel vehicle and the pick
18 up truck segment, you try to buy one on Craig's
19 List or ebay you simply can't get one without
20 paying way more money than you really want to.

21 That is reflected as well, it's similar
22 to the demand for hybrid electric vehicles, used
23 hybrid electric vehicles. Obviously there's a big
24 demand for used hybrid electric vehicles that have
25 carpool stickers on them, carpool lane stickers.

1 But I guess the point is, the market
2 research that is available anecdotally indicates
3 that there is a demand for this product and we'll
4 see. We'll just have to wait and see.

5 The only difference I can tell you
6 between this powertrain and the ones that are
7 reflected in the summary of the report is that
8 this is really the only powertrain where the auto
9 makers have said, we are producing them, and in
10 this volume. We are coming to market with them.

11 The other stuff they're working on. And
12 there's no questions that they have plans to come
13 market at some point. But in the near term, the
14 next 10 to 15 years this is a powertrain in
15 addition to hybrid electric powertrains that have
16 been selected by the auto makers to test that
17 market.

18 So, again it's the bio-capability of
19 this powertrain that we want to be reflected in
20 this document. So thank you very much. I
21 appreciate that.

22 PRESIDING MEMBER BOYD: Thank you,
23 Commissioner, any questions?

24 ASSOCIATE MEMBER BYRON: Mr. Fulks,
25 thank you as well for being here. It's

1 unfortunate that the bio-to-liquids is lumped
2 together with the other XTLs. Your point is well
3 taken there.

4 And maybe we should call it liquid-from-
5 bio and that way it won't get lumped.

6 MR. FULKS: Well, but there's also the
7 third generation renewable diesel which does come,
8 it's similar in fashion to cellulosic ethanol
9 based from wood waste and so forth. But it's not
10 from coal. It's not from a carbon-based
11 feedstock. So there really is a difference in the
12 technology.

13 COMMISSIONER BYRON: Thank you. Thank
14 you for your comments.

15 PRESIDING MEMBER BOYD: Dave Modisette,
16 California Electric Transportation Committee.

17 MR. MODISETTE: Thank you Commissioners,
18 Mr. Fletcher and staff. Dave Modisette with the
19 California Electric Transportation Coalition. And
20 we're going to try and do this presentation in two
21 parts today. I'm going to do the policy part and
22 then we've hired somebody, Brent Riffel with a
23 company called Life Cycle Associates, who's going
24 to use the staff's model and show you what happens
25 if you make just a couple of the changes I'm going

1 to mention in the policy presentation today.

2 How that reflects the cost effectiveness
3 analysis which is done in the report. You can
4 see, we are calling this a preliminary assessment.
5 I'm sure you're dismayed to see that. We are too.

6 But unfortunately the fact of the matter
7 is that we've only had the background information
8 and assumptions from this report for the past
9 week. So we're going to tell you as much as we
10 can today. But this is a very, very complicated
11 undertaking. And there's probably more
12 information which we could provide if there was
13 more time.

14 I'm actually going to start with the
15 slide that I used at your very first committee
16 workshop more than a year ago. At that time TIAX
17 presented its market assessment for alternative
18 fuels.

19 And we were fairly critical of that
20 market assessment because it focused on battery,
21 electric vehicles which were assumed to have a
22 very high incremental cost.

23 And the conclusion of that market
24 assessment was that there really was not much
25 opportunity for electric transportation to

1 displace petroleum because of those factors.

2 And we said, well no, that's the wrong
3 conclusion. You're ignoring some very important
4 markets for electric transportation.

5 In particular as you can see up here in
6 the industrial sector. Lift trucks for example
7 have a 60 percent market share. You can see some
8 of these others. Plus there are several growth
9 areas for electric transportation such as truck
10 stop electrification, port electrification,
11 electric standby truck refrigeration units and
12 light-duty, plug-in hybrids.

13 And so with that staff listened to us.
14 And I think to their credit they went ahead and in
15 their future analysis for this proceeding they put
16 together an electric drive story line which
17 included what they called the big five categories
18 of electric transportation.

19 They included port electrification as
20 you can see here. Truck idling reduction, truck
21 refrigeration units, electric lift trucks and
22 other industrial equipment and plug-in hybrids.

23 And we agreed with the staff that these
24 probably are the big five growth areas for
25 electric transportation. So we were very, very

1 pleased to see this work done.

2 This is a snapshot from the staff's work
3 on the electric drive story line, straight out of
4 their document. Very briefly I'm just going to
5 kind of focus on this bottom document here which
6 shows the, this bottom section, I'm sorry, which
7 shows the true life cycle costs analysis of all
8 these five technologies taken together.

9 You can see there's, oh I see, you can
10 see there's up-front costs calculations. That's
11 the capital costs. There's an operational savings
12 calculation.

13 And I guess what I really want to point
14 out to you here is that if you look at the net
15 life cycle costs taking those two factors into
16 consideration, these are negative numbers.

17 What this means is that consumers are
18 saving money over the life of these vehicles.

19 This also displays petroleum
20 displacement and greenhouse gas reductions and you
21 can see in the later years the numbers get very
22 high, almost a billion gallons of petroleum
23 displaced from these technologies and greenhouse
24 gas reduction at about 10 million tons per year.

25 I also included the analysis a little

1 further out just so you can see how the numbers do
2 get very, very large particularly out in the later
3 years here. You can see there's 4.8 billion
4 gallons displacement out in the last year and
5 greenhouse gas reductions of about 50 tons.

6 So in October we got a big surprise
7 though. The committee draft came out and the
8 numbers in the committee draft for electric
9 transportation didn't look quite right.

10 And so we started saying, gosh you know,
11 what is in these numbers. Because that's not what
12 the scenario is telling us.

13 And so as I said a week ago we did get
14 the staff's spreadsheets and background
15 information in this area. What we discovered is
16 that staff has developed a new scenario which is
17 in the committee draft and it's not the story line
18 scenario.

19 What they did is they took one of the
20 technologies from the story line scenario, the
21 plug-in hybrids which we agreed with and they put
22 it in this new scenario. But then they added
23 three new technologies which were not in the
24 scenario.

25 They added full-function battery

1 electric vehicles with an assumed incremental
2 cost, a very, very high incremental cost that
3 begins at about \$60,000.00, medium-duty, plug-in
4 hybrid vehicles with an assumed incremental cost
5 that begins at \$300,000.00 and heavy-duty, plug-in
6 vehicles with an assumed environmental, excuse me,
7 an assumed incremental cost that begins at
8 \$400,000.00.

9 And you can probably guess that adding
10 these new categories of vehicles with these very,
11 very high incremental costs changes the cost
12 effectiveness calculations very, very much.

13 And I guess I have to say what happens
14 in the real world if you really have incremental
15 costs at these levels is one of two things.

16 Either these vehicles don't get built,
17 at least not in the time frames that are
18 projected. Or two, very, very few of them are
19 sold. So few that it doesn't really make a
20 difference in terms of petroleum reduction.

21 So we believe that the use of this new
22 scenario as opposed to the story line, first of
23 all is not realistic at all. There's not one
24 commercial product available today among the list
25 of vehicles in this scenario.

1 Extremely high vehicle costs,
2 particularly in the early years. So you end up
3 with higher costs and lower benefits than what was
4 in the story line scenario.

5 So our recommendation would be that you
6 use the story line scenario which took months and
7 months and months to develop where there was
8 stakeholder input rather than the scenario which
9 is in the committee draft currently.

10 If you want to add technologies, that's
11 fine. We're happy to work with you on that. But
12 given the two choices we feel like the story line
13 scenario is the better choice.

14 Let me say some things about R&D
15 expenditures in the economic analysis. First of
16 all why does this matter? It turns out after you
17 look at the staff's spreadsheets it matters a lot.

18 Well what's happening in the early years
19 of the analysis is that there is very, very few
20 vehicles to provide benefits. But there's a lot
21 of R&D which is added in each one of those years.

22 So you end up with the R&D washing away
23 the cost effectiveness. And in the early years
24 things don't look very cost effective. The reason
25 for that is because we're adding in large chunks,

1 hundreds of millions of dollars in R&D in these
2 early years.

3 So first of all we believe the total R&D
4 expenditures for electric drive is way too high.
5 It's 5.33 billion dollars which seems way too high
6 particularly if you're using the story line
7 technologies which are largely commercially
8 available today.

9 And I can talk a little bit about the
10 information source where I think that that figure
11 came from if you'd like me to do that.

12 Okay, and secondly in the 5.33 billion
13 there is an assumed 81 million dollars in state
14 funding per year. From now through 2022 and then
15 43 million dollars after that. And don't get me
16 wrong, we'd like to have 81 million dollars in
17 state funding from AB 118 which was just recently
18 signed by the Governor but since you've only got
19 about 123 million I think that that's not
20 realistic at all.

21 And so we think a lower number which
22 reflects the resources that the state has
23 available would be much more realistic and
24 reasonable.

25 And lastly, we believe R&D should really

1 be amortized across the vehicles sold rather than
2 in these big, lump sums every year. And we think
3 that that would be a better characterization of
4 the cost effectiveness of these vehicles with the
5 R&D added.

6 Other assumptions, we believe that staff
7 should use a range of electricity prices. We
8 would just note that three of the largest service
9 areas in the state, PG&E, LADWP and SMUD currently
10 have electricity prices, off-peak prices, for
11 these technologies which are half what the staff
12 is assuming.

13 We also believe the report should
14 incorporate figures for electricity used in mass
15 transit. It turns out the Energy Commission's
16 demand forecasting office collects this
17 information and they forecast this information.
18 And it's fairly significant, 488 gigawatt hours a
19 year.

20 This figure was also mentioned in the
21 2005 IEPR so we believe it should be incorporated
22 into the alternative fuels report.

23 And lastly the alternative fuel use
24 goals for electricity are too low. They're
25 actually below the business-as-usual forecast in

1 the story line. So you're going to meet these
2 goals whether there's no additional work
3 whatsoever on these technologies.

4 Design and display of the economic
5 analysis. We really think it would have been
6 better if you would have displayed life cycle
7 costs, again very similar to the story line
8 display, rather than the display which is in the
9 report which is a separate section on capital
10 costs and then what is called consumer payback.

11 Let me talk a little bit about consumer
12 payback. We think the whole concept of consumer
13 payback in this situation is misleading.
14 Consumers do not purchase alternative fuels.
15 People don't buy cars like an investment.

16 They buy cars for all different kinds of
17 reasons. They buy alternative-fuel cars for
18 different reasons. So what the analysis does in
19 the consumer payback section is it assumes that
20 consumers have a required payback period of seven
21 years. They have to be paid back within seven
22 years is the assumption in the analysis.

23 And in addition to that they have to
24 earn an eight percent rate of return on that
25 investment. And those two bars we think really

1 skew the analysis. It's a policy judgement which
2 we think that consumers and fleet should be able
3 to make on their own.

4 And if you were to simply display the
5 costs and benefits by year, people would be able
6 to make these decisions for themselves rather than
7 to overlay this kind of policy decision in the
8 analysis.

9 Next, surprisingly the analysis does not
10 include a value for the societal benefits of fuel
11 diversity. I find this very strange coming from
12 the Energy Commission which talks over and over
13 again about the benefits of fuel diversity in
14 terms of supply security and reducing price
15 volatility. So we think that that should be added
16 to the analysis.

17 And then lastly infrastructure costs are
18 assumed away in the economic analysis. The costs
19 for infrastructure in the economic analysis for
20 all the fuels is zero.

21 And I think we simply want to say, is
22 that the best way to analyze it? I can tell you
23 that infrastructure costs are very, very large.
24 Infrastructure costs are a problem. It's
25 difficult to get people to make investments in

1 infrastructure.

2 And so just to assume them away and say,
3 oh well it's in the price of the fuel we think is
4 probably not the way to do the analysis.

5 Last slide, policy recommendations. We
6 generally thought the policy recommendations are
7 good. We probably would have preferred that they
8 be a little more specific in terms of who is going
9 to do what by when. But we felt like they were
10 generally good.

11 However we think that one of the stated
12 goals in the plan should be to commit to a greater
13 level of specificity and detail. Commissioner
14 Boyd already mentioned the state implementation
15 plan type model. And I agree it's going to be
16 difficult to get to that level of specificity
17 because the CEC has been doing this for a long,
18 long time.

19 But it seems to me that that should be
20 our goal, that level of specificity should be our
21 goal. Because I think without those very specific
22 targets it's going to be very, very difficult to
23 meet our goals.

24 We do have one policy recommendation.
25 We would recommend removing the recommendation

1 that projects that receive future state funding,
2 alternative fuels funding, under AB 118 surrender
3 their carbon reductions.

4 Now that AB 118 has been passed I think
5 this is a policy decision that the two agencies
6 should be making. But what it does is to
7 essentially put this program in competition with
8 the low-carbon fuel standard. Because now an
9 applicant is going to have to say, well gosh, if I
10 take state incentive funding then I'm not going to
11 have any carbon reductions in terms of the low-
12 carbon fuel standard.

13 And I think a better approach would be
14 to marry these two programs, make them
15 complementary to each other rather than put them
16 at competition.

17 Lastly we believe the story line report
18 which again we thought was really excellent should
19 be adopted as an appendix to the plan. That's
20 really where all the detail is at. That's where
21 all these recommendations come from.

22 And we think that it deserves the
23 additional weight of being adopted by the
24 Commission as an appendix to the plan.

25 With that I'm finished. And if there

1 are any policy questions I can take them now or if
2 you'd like to hear from Brent I'll see if he can
3 come up here quickly.

4 PRESIDING MEMBER BOYD: Well thank you
5 Dave. This is a workshop not a hearing. So it's
6 not us versus them or we're not defending a
7 Commission-issued final report. So I really would
8 kind of like to get some staff comments on some of
9 the points that were made here.

10 Because I must admit they're intriguing
11 and even somewhat compelling. So, Tim, I don't
12 know if you and the staff want to go through this
13 or you have any specific comments on some of these
14 issues, particularly the economic issues that were
15 raised. Or that R&D figure. Even I snickered
16 over, you know everybody has got their hand out.
17 Everybody wants some money. But it's true that
18 that's an awful lot of money to spend on R&D in
19 one area when we're, that would be most of it. So
20 that's kind of an unusual number, \$81 million.

21 MR. OLSON: We have staff here.
22 McKinley Addy, Diana Schwyser, Mike McCormick and
23 Mike Jackson from TIAX who helped us put all this
24 work together. We can go through these items.

25 I think I will make one overall comment

1 about the economic analysis. We tried to match
2 up, we were asked to match up our economic
3 analysis approach with the AB 32 CAD analysis and
4 the approach that was adopted by the Air Board and
5 the Energy Commission and actually multi-agency
6 work groups. So that's one factor in the economic
7 approach we used.

8 But I'd like to have McKinley, Diana and
9 maybe Mike respond to these comments or try to
10 elaborate on some of the assumptions we used in
11 doing these calculations.

12 PRESIDING MEMBER BOYD: Well one of the
13 big questions that was introduced right at the
14 beginning was the change in assumptions between
15 the original story line which did kind of spread
16 this out over a multitude of known and somewhat,
17 well known and existing in many cases,
18 technologies, to a presentation that did well on
19 technologies that are, let's just say, barely
20 there.

21 MR. ADDY: Thank you Commissioner Boyd.
22 My name is McKinley Addy. I'm with the AB 1007
23 team in the fuels and transportation division at
24 the Energy Commission.

25 I'll begin by first saying in response

1 to Cal-ETCs comments that the AB 1007 analysis and
2 the plan contemplates that all of the alt fuels
3 are cost competitive over the time of the
4 analysis.

5 There are some periods during the
6 analysis where because of the incremental cost of
7 the technologies considered and because of the
8 vehicle populations the cost performance is not as
9 attractive as in the later years.

10 The second point about Table 4 and the
11 fuel use or the fuel results being changed from
12 what's in the story line can be explained in a
13 number of ways.

14 First we've modified Table 4 to account
15 for the fact that the original numbers did not
16 include the truck refrigeration units, the cold
17 ironing sector that the scenario analysis includes
18 as well as the fork lifts that the scenario
19 analysis include. We've corrected for that.

20 We were asked to add battery electric
21 vehicles by other people in the electric drive
22 stakeholder community. And also we wanted to be
23 consistent with the Air Resources Board's ZEV
24 mandate that has battery electric vehicles
25 considered as an option in that work.

1 We also added medium and heavy-duty
2 plug-in hybrid electric vehicles but not in very
3 large numbers. Again in response to some
4 representations from other members of the EV,
5 electric drive stakeholder community.

6 Another difference in the results
7 between the story line and the Table 4 information
8 can be explained this way. In Table 4 we report
9 the actual fuel use as opposed to the avoided
10 petroleum that is reported in the story line.

11 So the story line document show
12 petroleum displaced. When you take into account
13 the efficiency of the electric drive technologies
14 and adjust the electricity used that we report in
15 Table 4, the numbers actually become consistent or
16 similar, similar to, what's reported in the story
17 line document.

18 I next want to comment on the treatment
19 of R&D expenditures in our economic analysis. The
20 R&D expenditures that are used in the 1007
21 economic analysis for AB 1007 for electric drive
22 is based on industry estimates of the typical
23 research and development expenditures that the
24 auto manufacturers have reported.

25 And particularly we cite experiences of

1 GM in developing the EV one product as well as
2 other companies ruling out completely new vehicle
3 platforms. We used a resource that was provided
4 to us by some of our friends in the electric
5 vehicle, in the electric drive stakeholder
6 community to try to capturize (sic) the research
7 and development expenditures for making available
8 a certain number of electric vehicle and drive
9 offerings to satisfy the fuel use goals or the
10 fuel use results that we reported in the 1007
11 analysis.

12 The numbers that we report as possible
13 state R&D support are based upon the historical
14 information we pulled together from how research
15 and development dollars have been cost shared in
16 the past both based on what the US Department of
17 Energy practices have followed, what we've done
18 here at the Energy Commission and essentially it's
19 a 50/50 split with 25 percent coming from the
20 state and 25 percent coming from the federal
21 government.

22 This is not to say that looking into the
23 future those splits will continue as happened in
24 the past. But for purposes of our analysis and to
25 understand the cost structures of these different

1 technologies we felt it was important for us to
2 have some kind of a basis for apportioning the
3 research and development expenditures.

4 The research and development
5 expenditures are also amortized over the vehicle
6 population, over certain time periods. The time
7 periods might have varied from technology to
8 technology but we did not just bunch up the
9 investments over a certain year. They were also
10 amortized over the vehicle population.

11 The comment about mass transit
12 electricity not being included. Perhaps we should
13 have but we did not consider that.

14 I'd like to comment on the cost
15 performance of the electric drive technologies.
16 We reviewed the cost performance from different
17 perspectives. And we believe that the life cycle
18 costs of performance metric is just one of many
19 ways of looking at the cost performance of any one
20 of these technologies.

21 We felt that, for example, looking at a
22 consumer payback period helped us understand how
23 the alternative fuel technologies could perform
24 over a range of gasoline and diesel prices as well
25 as a range of the alternative fuel, in this case

1 electricity price.

2 The comment about using the eight
3 percent rate of return. We acknowledged that that
4 is a little high. And, in fact, in one of the
5 iterations that my colleague Diana Schwyser and I
6 did we looked at a five percent return and that
7 improved the cost performance in that payback
8 curve.

9 I hope those comments help clarify our
10 response to some of the issues that Mr. Modisette
11 raised.

12 PRESIDING MEMBER BOYD: Is it customary
13 to use payback period when you're dealing with the
14 consumer and their automobile? I think most of us
15 never expect to break even or what have you.
16 Maybe we think we might get our investment back
17 over a period of years if we're investing in a
18 long period of years where an early adopter of
19 some new technology but to run it through a kind
20 of normal rate of return analysis puzzles me a
21 bit.

22 MR. OLSON: Commissioner I'd like to
23 have Mike Jackson respond. I also wanted to
24 introduce Barbara Fry who is sitting on the other
25 side there from the Air Resources Board.

1 Mike can you comment? This is I think
2 pertains to the cost curves and the how we compare
3 gas, the cost of the vehicles and the fuels
4 combined over time to gasoline and diesel prices.

5 MR. JACKSON: Yeah, Mike Jackson, TIAX.
6 We were trying to look at as McKinley said, we
7 were trying to look a number of different ways you
8 could sort of slice the cost problem with some of
9 these fuel.

10 And one thing that the sort of payback
11 period gives us an idea of is how severe is that
12 up-front premium of these vehicles relative to a
13 baseline.

14 And it was meant more in the philosophy
15 of, okay, if that payback period gets fairly long
16 that means they need more incentives up front to
17 be able to get that technology in the marketplace.
18 Or I need to think of a different way of marketing
19 that vehicle.

20 Such as, let's take an example of a PHEV
21 where the battery costs are fairly significant.
22 Well maybe the consumer doesn't want to risk that
23 up-front dollars to go buy that vehicle and wait
24 until he gets a five, six, seven year payback.

25 But maybe if that vehicle was marketed

1 such that that battery was leased to him.
2 Somebody else bought down that first cost. So
3 that was sort of the philosophy of trying to use
4 these kinds of metrics so we could take a look at
5 what the problem was, not necessarily what the
6 answer is.

7 PRESIDING MEMBER BOYD: Again I guess
8 the crystal ball is real hazy on some these. Some
9 of these come up on the manufacturer making
10 decisions of what he's going to pass through to
11 the customer and what they're going to choose to
12 absorb as they introduce a new technology or a new
13 model or something.

14 Well were we consistent across all fuel
15 vehicle lines then being this approach?

16 MR. ADDY: In the approach for the
17 consumer payback curve?

18 PRESIDING MEMBER BOYD: Right.

19 MR. ADDY: Yes. I think we evaluated
20 what, about seven, seven or so fuels. The
21 consistency in the approach took into account a
22 low incremental price and a high incremental
23 price.

24 And then we also, as I said, considered
25 the fuel prices that the different or fuels would

1 command in the time frame that we performed the
2 cost payback curve analysis over.

3 And we also, again, used the fuel prices
4 for the conventional fuels that the Committee and
5 the plan considered.

6 PRESIDING MEMBER BOYD: Okay, the last
7 question from me. On the R&D costs I understood
8 the answer with regard to a new product line is it
9 fair to consider some electric drive technologies
10 as new product lines since we've been there
11 partially in the past and some of this is coming
12 back off the shelf.

13 You know, it's kind of like we're
14 entering the freeway from an exit ramp a little
15 farther down the road than perhaps if we were
16 starting from scratch. Thus, you know, thus
17 deriving the \$81 million a year need. I'm just
18 wondering if that is applicable to this
19 particular, these particular strategies.

20 MR. ADDY: Let me attempt to see if I
21 can answer that, Commissioner Boyd.

22 From what we have understood the market
23 to be doing concerning plug-in hybrid electric
24 vehicles is that rather than say modify some of
25 the existing vehicle platforms to incorporate the

1 plug-in hybrid electric drivetrain many
2 manufacturers are considering the complete roll-
3 out of new models. And to that extent that
4 informed our thinking on this.

5 I mean, you've got people like GM coming
6 out with the Volt. I think Nissan for example is
7 thinking of a battery-electric vehicle that is
8 sort of a new model. So it was based on, again,
9 the practice of the industry and how they have
10 attempted to introduce new vehicles and new drive
11 trains that informed our thinking on the use of
12 the research and development costs in the
13 analysis.

14 We didn't just take that directly. We
15 made some modifications to account for the kinds
16 of factors that you're thinking about as well some
17 of the uncertainties in how that information could
18 influence our analysis. And my colleague Diana I
19 think has some comment.

20 MS. SCHWYSER: Thanks, McKinley. I
21 wanted to thank Dave Modisette for his good
22 comments and I'm glad you're bringing up these
23 issues to help us clarify how the economic
24 analysis was done and improve it where we can. I
25 wanted to comment on a few of the things you

1 brought up.

2 First of all the reason for the
3 different types of vehicles that were analyzed in
4 the story-line scenario and the economic analysis
5 of the plan was that the economic analysis in the
6 plan was done specifically for on-road vehicles.
7 I think maybe that wasn't clear enough in the
8 text. But that's why, for instance, the cold-
9 ironing forklifts and other electrification
10 applications were not included in that analysis.

11 And McKinley explained our reasoning for
12 including battery electric vehicles and heavy-duty
13 plug-in hybrids as well as light-duty plug-in
14 hybrids to try to include the broader range of
15 vehicles that the stakeholders were interested in
16 looking at. But we do realize that it is possible
17 that skewed the economic, the cost-effectiveness
18 analysis to make electric vehicles perhaps appear
19 less cost-effective than they might have if all of
20 those offroad electrification applications had
21 been analyzed.

22 Second, regarding the electricity price
23 issue that you brought up. I know we have talked
24 about this a little bit. The price that we used,
25 as you know, was based on existing electric

1 vehicle charging rates across those five or six
2 utilities' current electric vehicle charging
3 rates. And we did do a sensitivity analysis
4 looking at the lower electricity price that you
5 suggested and it looks like maybe you're going to
6 present some analysis that you all have done too
7 so I'll be interested to compare those results.

8 Third, in terms of the methodology for
9 the cost-effectiveness analysis. The reason that
10 the benefit of avoided petroleum use wasn't
11 monetized in that formula was because we were
12 attempting there, as Tim Olson mentioned, to be
13 consistent with the methodology used in the
14 climate action team analysis as they looked at the
15 cost-effectiveness of greenhouse gas emission
16 reduction for a number of different strategies.

17 That includes basically just the actual
18 monetary costs and savings associated with the
19 different strategies as well as the results are
20 presented with and without the value of avoided
21 emissions. But no other monetized social
22 benefits. So that was why we did not include,
23 monetize that value of avoided petroleum use.

24 And last of all in terms of the comment
25 that infrastructure costs were assumed away in the

1 cost-effectiveness analysis. I would like to
2 point you to page 15 I think it is of the -- let
3 me just check to make sure that's the right page.
4 the infrastructure cost section of the economic
5 analysis staff report that's been released and
6 will be on the website soon but you have seen
7 this.

8 Infrastructure costs were not assumed
9 away in the cost-effectiveness analysis. What we
10 did assume was that we didn't want to double-count
11 those infrastructure costs that would be recovered
12 in the vehicle or fuel price. So if --

13 And we assumed that infrastructure costs
14 that were covered by the industry would then go
15 toward increasing the price of the vehicle or the
16 fuel because they would be recovered in some way.
17 And since we were assuming those higher vehicle or
18 fuel costs we didn't want to double count those.
19 So in some cases that's why infrastructure, those
20 particular infrastructure costs were not included.
21 And I think that wraps up my comments for now,
22 thanks.

23 ADVISOR BROWN: I have one question and
24 that is, in the errata that the staff presented,
25 on page 13 of the errata you have two amended

1 tables, tables 12 and 13. And I was comparing
2 them to the original two tables in the Committee
3 Draft and it would appear that for electric
4 drivetrain that the economics, the cost-
5 effectiveness in both of these tables has been
6 adjusted to make it more favorable. Am I reading
7 that right? It's in the errata.

8 MS. SCHWYSER: The change that was made
9 I think Dave Modisette and I discussed briefly was
10 that was a mistake in the analysis. We realized
11 that the electricity price we were using, a
12 conversion was done incorrectly basically so we
13 corrected that. And that's the reason. I can go
14 into more detail if you're interested but that's
15 the reason for the change in that price, it's not
16 in response to these comments.

17 ADVISOR BROWN: So in effect the staff
18 has not really had a chance to respond in any
19 detail to the comments that we just heard.

20 MR. ADDY: We've not had a conversation
21 with Dave and the Cal-ETC stakeholders. However
22 on October 9 in preparation for that workshop I
23 attempted to prepare some preliminary remarks or
24 statements in response to Cal-ETC's earlier
25 submittal. And I am not sure if Dave had had a

1 chance to look at those closely.

2 MS. SCHWYSER: I'll add to that that we
3 have had a chance to, for instance, look at the
4 sensitivity of the cost-effectiveness results to
5 the different electricity prices that Cal-ETC is
6 recommending. We have not had the chance to redo
7 the cost-effectiveness analysis to include the
8 additional vehicle types and I don't imagine that
9 will be feasible for us to do by next week either.
10 Although I'll be interested what we're going to be
11 presented in a few minutes.

12 MR. OLSON: Commissioners, I think one
13 of the things I would recommend here is kind of
14 looking at the big picture on this that things
15 like the payback period graphic was an attempt to
16 introduce a concept that was, what is the price
17 floor at a point where the alternatives start
18 becoming at parity with gasoline and diesel?

19 And we concluded that's in the range of
20 \$3.50 a gallon gasoline a gallon equivalent to
21 around five-and-a-half, six dollars. In that
22 range, not stating what time frame but in that
23 range, under a number of assumptions, that the
24 alternatives, each of the alternatives starts
25 becoming at parity.

1 And the concept kind of extends a little
2 further. So how do you close that gap? Well we
3 think it's with the low-carbon fuel standard and
4 the incentives. And we can argue over the details
5 where that might be but we wanted to present that
6 argument that there is a rationale, there is
7 another rationale for the incentives and the low-
8 carbon fuel standard in trying to close the cost
9 gap with gasoline and diesel, knowing that many of
10 these alternatives today are more expensive. When
11 you look at the total cost stream they're more
12 expensive than a conventional vehicle, including
13 all of those loaded costs.

14 So we're very open to getting more
15 detail on this and having that verified, if not
16 for this report for continuing this work as we are
17 developing our analysis and assisting the Air
18 Resources Board on the low-carbon fuel standard.
19 Analysis that will impact the investment plan for
20 the AB 118 funding and other future policy forums
21 that we intend to participate in.

22 PRESIDING MEMBER BOYD: Well I don't
23 want to protract this too long but I will confess
24 I am struggling on several of these points, the
25 regular turn approach, the lack of use and

1 societal benefits. And I hear the consistency
2 with the climate action team approach. Maybe
3 that's why I am not very active in the climate
4 business anymore.

5 And just the idea that this kind of
6 calculation ends up with an \$81 million state
7 funding contribution to R&D being a necessity.
8 That's probably too strong a word. Dictated too
9 strong a word. But to come out of the equation
10 let's just say. I've lived through every, I think
11 every modern-day alternative vehicle
12 transportation fuel introduction in California
13 state history. And it didn't take state
14 expenditures of this magnitude usually to,
15 particularly in the electricity area, to induce
16 manufacturers into the market. I think the impact
17 didn't cost us a cent and wasn't a mistake in
18 spite of history, et cetera, et cetera.

19 So I guess Commissioner Byron and I will
20 have to wrestle with this. And I don't know if,
21 David, you wanted your compatriot to say anything
22 more on this. All right, I thought he
23 disappeared. If you want to add anything more to
24 this discussion. I hate to protract this but this
25 is the 11th hour and the 30th minute in this

1 process. So if you want to put some information
2 on the record for us you better do it.

3 MR. OLSON: So Brent Riffel will now
4 complete the presentation.

5 MR. RIFFEL: Hello, I'm Brent Riffel, I
6 work with Life Cycle Associates. And as Dave said
7 earlier we have been working with them for the
8 last couple of days really trying to work quickly
9 to get some good sensitivity analysis of the CEC
10 cost-effectiveness spreadsheet for these different
11 plug-in hybrid vehicles.

12 And basically I think that is a good
13 description of what we're doing here, is a
14 sensitivity analysis of what are some reasonable
15 inputs for the major categories, fuel costs,
16 vehicle costs and R&D and see how that is going to
17 change the cost-effectiveness. And there's a lot,
18 there's a lot of modeling going on in the
19 spreadsheet so we're really just going to focus on
20 a few key results that we think are illustrative
21 of what is going on.

22 So the first thing, the very first thing
23 before I go to the first draft that is going to
24 catch your eye, I want to tell you, is we did some
25 log-log graphs just to see if the cost volume

1 curves were reasonable. And we felt they were.
2 They don't follow the typical logarithmic curves,
3 it's more of a linear buildup based on the given
4 year inputs and linear interpolation between
5 those. But we feel it's reasonable and therefore
6 continued our analysis with the given CEC inputs.

7 So just to give you an idea this is the
8 basic, baseline CEC cost-effectiveness for the
9 three scenarios, Scenario A, B and C, Case A, B
10 and C that were investigated. And I believe that
11 mix is for case -- I think they vary a little bit
12 across scenarios. I think it's for Case C that we
13 see the average vehicle mix of that period of time
14 that we're looking at there. So it's mostly plug-
15 in hybrid 20s with very few heavy-duty vehicles.
16 But as the cost of the vehicles show, that is very
17 expensive for heavy-duty plug-in vehicles and this
18 can change the outcome.

19 So this is the weighted cost-
20 effectiveness based on that mix of vehicles. And
21 you can see that, of course, Case A is the most
22 conservative, Case C is the most liberal. And
23 we're going to look at Case A, which assumes the
24 higher costs. We're going to change the CC inputs
25 a little bit but relative to the other cases the

1 higher costs of vehicle technology and lower
2 benefits of greenhouse gas productions and other
3 benefits.

4 So we're going to focus on for the next
5 couple of slides just the battery electric
6 vehicles. Those had the highest overall costs
7 assumed by the CEC and those came down the most
8 over time. They came down much more quickly than
9 the plug-in hybrid 20 and the plug-in hybrid 40.

10 So we conclude preliminarily that the
11 costs are very high. The incremental BEV initial
12 cost is around 65K a vehicle and it declines
13 thereafter. We're looking at more of a
14 conservative estimate of around 10 to 15K per
15 vehicle incremental battery-electric vehicle
16 costs, as Dave said.

17 And you can see what the impact on that
18 is not changing anything else. Not changing R&D
19 or the fuel cost. You can see it does have -- Now
20 what I should have done is put them on the same
21 scale. But you can see that it does have a
22 relatively large impact.

23 The capital cost, of course, up front is
24 very important. That causes -- that initial very
25 high dollar per GGE reduced outcome in this chart

1 with large gains in the future once the fuel
2 savings start to take an impact.

3 So continuing to focus on Case A, the
4 conservative case, with R&D impact. As everyone
5 has been saying, \$81 million is a bit
6 unreasonable, it's too high. And the initial CEC
7 assumption is federal and state funding of \$81
8 million in each year at both the state and federal
9 level and that is reducing to \$21 million in 2022
10 for the next eight years.

11 And we think that \$5 million state
12 funding per year and \$10 million at the state
13 funding is a bit more reasonable and that is
14 currently being applied. These results are being
15 applied on a per year basis rather than being
16 amortized, as this is preliminary work so that
17 would change it a little bit.

18 But you can see I think the major point
19 of this is it doesn't have a very large impact.
20 There already has been a lot of private investment
21 in plug-in hybrid electric vehicles and it will
22 have, you know, state funding and federal funding
23 will have a sizable impact but there are other
24 cost-effective variables that are more important.

25 So the fuel impact. There has been a

1 lot of talk on what exactly we should use for the
2 assumption. The CEC assumes 13 cents per kilowatt
3 hour and we're looking at about 7.24 cents here.
4 And again this is a sensitivity analysis looking
5 at what that effect is going to be, isolated. And
6 you can see that that has a small but significant
7 effect. Small but important effect I should say,
8 over time. Again we are still concentrating on
9 the battery-electric vehicles only in Case A.

10 So this is the net change just showing
11 these three, these three changes. And of course
12 there could be other changes assumed with
13 different vehicle deployment and applying net
14 present value in different ways. But you can see
15 that there's really about a factor of ten change
16 here across the years based on what the input
17 assumptions are and that's significant.

18 We feel our parameters are somewhat on
19 the conservative side given that our vehicle costs
20 are definitely in the proven concept literature
21 and the existing literature and they are
22 definitely -- we're using -- these are based on
23 Case A, the most conservative, possible scenario.

24 So this is showing the overall -- This
25 is a table because I know a lot of people like to

1 look at numbers rather than actual, looking at
2 bars. But you can see using all of these
3 assumption we just talked about, all of these
4 assumptions we've just talked about are now
5 implicit, imbedded in this calculation. And right
6 here you can see for the different vehicle classes
7 for Case A the change in dollar per GGE reduced,
8 versus using our Cal-ETC assumptions,
9 preliminarily they say down here.

10 Now I should comment that these
11 calculations as such do not include a reduction
12 which we feel is necessary for the heavy-duty
13 vehicles, which I am going to show in the next
14 slide. Currently as Dave pointed out, those are
15 quite high. We're looking at a 200 to 400K
16 incremental cost on the heavy-duty electric
17 technology and so that number is quite high still.

18 But the major thing to take away from
19 this is that changing R&D did not have a very
20 large effect. The fuel cost assumption is small
21 but important. It is very, of course, sensitive
22 to capital costs and that causes very high, very
23 high results in these numbers in initial years
24 with negative numbers, as you can see in the later
25 years as the fuel savings start to have a larger

1 benefit.

2 And of course that is even more
3 significant in cases B and C where you have larger
4 vehicle deployment and higher carbon costs.

5 So here is that change again. These
6 appear to be in the wrong order. This is just for
7 battery-electric vehicles so you can focus in on
8 this particular result. And you can see that the
9 overall weighted change changes significantly,
10 becoming negative in those later years, 2020
11 through 2050 or so, indicating the benefit from
12 doing our sensitivity analysis.

13 And this is just one quick slide before
14 I conclude on the heavy-duty case. Again, medium
15 duty to heavy-duty having a 200 to 400, or 300 to
16 400K incremental cost in the CEC assumption. And
17 we're feeling that this could be half. Our
18 initial assumption conservatively is that we want
19 to use half of that assumption but it could be
20 considerably lower than that.

21 And that as you can see in the chart
22 there below has somewhat of a significant impact
23 on what these benefits are. What the cost-
24 effectiveness is. Of course, if we added in the
25 other impacts as well, the fuel cost and R&D, that

1 would be different as well, that would be even
2 more of a change. So that's it.

3 PRESIDING MEMBER BOYD: Thank you
4 Questions? No? Thank you, John. All right,
5 thank you. We're going to have to ponder this
6 one, I can see that.

7 Any other comments by staff? Barbara?

8 ASSOCIATE MEMBER BYRON: I would like to
9 say thank you very much for all your comments in
10 such a very short period of time. As Commissioner
11 Boyd says, we do have some stuff to consider here
12 with regard to potential changes.

13 MR. OLSON: Maybe one other comment is
14 as you're pondering what you want to do for this
15 report take this into account also for the long
16 term. That you can see that there's a lot of work
17 we did on trying to gather capital cost numbers
18 and we think that's a key factor in all this. In
19 some cases it's fuzzy, in other cases we got lots
20 of data.

21 Our intent is to continue gathering this
22 and improving on the analytical work we use for
23 specific things. Like I mentioned before, the
24 low-carbon fuel standard, AB 1118. This is an
25 ongoing effort and I am making a commitment from

1 our office here that we will continue upgrading
2 and interacting with these outside parties to
3 continue gathering information that could be
4 verified for our public use.

5 PRESIDING MEMBER BOYD: Thank you, Tim,
6 we're certainly going to need that in fulfilling
7 the objectives of AB 1118, in addition to the
8 objectives of this particular piece of
9 legislation.

10 All right, I would like to call --

11 MR. ADDY: Commissioner Boyd?

12 PRESIDING MEMBER BOYD: Yes.

13 MR. ADDY: If I may just one quick
14 comment to again put some of these costs in
15 perspective. If you look at some of the light-
16 duty vehicles, the light-duty battery-electric
17 vehicles that have been proposed by various
18 manufacturers like a truck that does 100 miles.
19 Or the test lab. You know, you have a \$60,000 to
20 \$100,000 price and then the delta is accordingly
21 calculated.

22 We know from the deployment of diesel
23 hybrid electric transit busses in the New York
24 area and I believe the Seattle area that those can
25 be in the range of \$500,000 to \$600,000. And when

1 you compare that to the conventional diesel
2 vehicle you get the kind of deltas that you see in
3 the analysis.

4 PRESIDING MEMBER BOYD: Thank you,
5 McKinley.

6 MS. SCHWYSER: And I'll let you move on,
7 I'm sorry. I just wanted to again than Cal-ETC
8 and Life Cycle Associates for taking an interest
9 in this analysis and looking into it. And also to
10 clarify, when I said we were not going to be able
11 to modify the cost effectiveness analysis to take
12 into account all of the off-road technologies, I
13 didn't of course mean that we wouldn't be able to
14 change the sorts of assumptions that they were
15 discussing. So I think we'll look forward to your
16 guidance on what data to use.

17 PRESIDING MEMBER BOYD: Okay. Randal
18 Friedman, US Navy.

19 MR. FRIEDMAN: Thank you Commissioners
20 and staff. My name is Randal Friedman. I am here
21 on behalf of Navy Region Southwest, the Navy's
22 regional command. I am also here on behalf of the
23 United States Marine Corps.

24 I spoke at the last workshop and at the
25 request of, provided some written comments by

1 email. I don't know if those were received
2 because I don't see any of the issues raised in
3 any of the erratas. I will just, to summarize --

4 ASSOCIATE MEMBER BYRON: Mr. Friedman,
5 we do have your comments. I've got a summary of
6 them right here.

7 MR. FRIEDMAN: Okay.

8 ASSOCIATE MEMBER BYRON: So we do have
9 them. But go right ahead.

10 MR. FRIEDMAN: Okay, well thank you. I
11 guess, you know, the military is the largest user
12 of biodiesel in the state. We are using nearly
13 two million gallons per year purchase of B100
14 equivalent. I think we have demonstrated that
15 biodiesel in an aggressive and everyday setting is
16 feasible with existing equipment. I would think
17 that this plan should recognize that biodiesel is
18 not a pipedream, it is not a far-off technology
19 but it is something that is here and now, is
20 feasible with existing equipment.

21 I would comment that in the changes that
22 were proposed in the discussion of biofuels, while
23 it does a bit go in the right direction, then as
24 you read through it essentially then says, yeah,
25 but whatever we do in biodiesel is okay but

1 ethanol is much better.

2 And again, from our perspective,
3 biodiesel is here now. There's no new
4 modifications, there's no new class of vehicles.
5 I believe that there was someone who commented at
6 the last workshop that if you actually run the
7 numbers you get far more positive results with the
8 use of biodiesel.

9 So I guess I would urge that you
10 continue to recognize that biodiesel does exist
11 now. Again in the correction that I made in my
12 comments, I don't know where B-2 or B-5 is in
13 current use because the standard use for biodiesel
14 in California by fleets is B-20, not just by the
15 military but a number of other jurisdictions. I
16 am not sure where anyone is actually using B-2 or
17 B-5 so I think at a minimum that needs to be
18 corrected in the report because you are referring
19 to a product that simply isn't in use.

20 Finally, and it is in the comments as
21 well, I think the continued road to use biodiesel
22 is dependant upon its acceptability for use in
23 California-modified engines by the Air Resources
24 Board that are as a result of the diesel
25 particulate reductions.

1 And I think that any alternative fuel
2 plan that doesn't deal with the fact that the Air
3 Resources Board is coming up with standards that
4 affect the ability to use fuels and engine is a
5 plan that in the long run can't be implemented.

6 I understand there's issues of fuel
7 specificities. We view this plan as a forum where
8 ARB can step forward in conjunction with you, and
9 if necessary, California develop the
10 specifications and develop the standards for
11 biodiesel. Instead of everyone pointing fingers
12 at everyone else this is the sort of document that
13 in fact can help solve that problem.

14 If there is a standard needed for
15 biodiesel we certainly in our fuel specs have gone
16 beyond the industry norm and have come up with
17 detailed fuel specs. Which is, I think, part of
18 the reason we're having a great deal of success.
19 If that is something that needs to be done
20 statewide then this plan should say that and
21 that's -- the comments that we submitted I think
22 move in that direction.

23 Anyway I thank you for this ability to
24 comment and available for any questions.

25 PRESIDING MEMBER BOYD: Thank you. You

1 made reference to B100. Do you have many
2 applications that use B100?

3 MR. FRIEDMAN: No, we don't. Just in
4 terms of -- When I say we purchased almost two
5 million gallons, that's actually ten million
6 gallons of B-20. So in terms of just making it
7 equivalent to. When you talk about biodiesel it's
8 confusing unless you actually define your terms.

9 PRESIDING MEMBER BOYD: My limited
10 knowledge on the subject was that you were using
11 B-20. And because you are who you are you were
12 able to dictate the quality issue pretty strongly
13 and you're getting a good quality fuel.

14 MR. FRIEDMAN: Yes, and we're --

15 PRESIDING MEMBER BOYD: Not the bathtub
16 biodiesel that some people find themselves --

17 MR. FRIEDMAN: No. And again, that's
18 why I think that this plan is -- and you have a
19 tremendous opportunity here in this plan that
20 looks so forward to essentially do what we have
21 done as well. I mean, I understand that that's
22 one of the issues with some of the retrofit
23 manufacturers, with some of the engine
24 manufacturers. The problem is not going to solve
25 itself.

1 I think the reality is, biodiesel is an
2 alternative fuel that is ready for prime time. It
3 needs some nudging, it needs some help. It is not
4 even so much that it needs -- It needs some of the
5 specificity. And I think that California as it
6 has shown on so many other things is in a unique
7 position to do that. And I think this document is
8 perhaps where that can happen.

9 PRESIDING MEMBER BOYD: I think you made
10 good points. It seems to me somewhere in the last
11 year we had a hearing in this room probably on the
12 state's bioenergy action plan, the subject of
13 biofuels, and we talked at length about biodiesel.
14 And I think I asked many of the industry folks as
15 we talked and they talked at length about the lack
16 of solving the specification issue that were
17 California to just go ahead one of its own would
18 that be a positive thing and most of them said
19 yes. Time has passed and not much has happened so
20 you raise a good point, thank you.

21 DIVISION CHIEF FLETCHER: I have a few
22 questions.

23 PRESIDING MEMBER BOYD: Yes Bob.

24 DIVISION CHIEF FLETCHER: And Randal,
25 we've had these discussions many times so what I'm

1 saying won't be any surprise to you. But I think
2 for clarity purposes, you know, we're not ready to
3 completely embrace B-20. As you know right now we
4 have quite a bit of research going on at the
5 moment to look at some of the effects that you
6 just mentioned.

7 Certainly the specifications for the
8 fuel that you have put down has resulted in the
9 fuel being used very well in your situation.
10 We're not -- I think we do need a specification.
11 We don't believe we have all the data available
12 yet to be able to draw that specification. We're
13 hoping to have that, say, you know, within the
14 next year or so.

15 But retrofit continues to be an issue to
16 us. The retrofit manufacturers have not yet
17 embraced B-20 in a retrofit application. We are
18 conditioning all new retrofits that they must be
19 capable of running on B-20 but that doesn't apply
20 to the legacies to this point.

21 But one of the comments you made about
22 the B-2 and B-5 and why we were addressing B-2 and
23 B-5 when it isn't really being used that much, I
24 think that is a correct statement. But we have
25 used B-2 and B-5 because the Legislature in the

1 past two years have had bills dealing with B-2 and
2 B-5. The vehicle manufacturers have pretty much
3 agreed that B-2 and B-5 would be fuels that would
4 be acceptable, that they are willing to stand
5 behind the warranties.

6 So as you said we're looking at those
7 nudges. We think it is important. But we are not
8 yet ready to completely embrace it until we finish
9 the ongoing research.

10 MR. FRIEDMAN: I understand that. My
11 comment on the B-2 and B-5 is as you read the plan
12 it implies that is the only, that is the biodiesel
13 fuel in use today. I understand and would agree
14 it has a place but I think my point is we and
15 others have shown that B-20 works, especially as a
16 fleet fuel. Therefore when you go backwards, if
17 B-20 can be demonstrated as a success then B-2 or
18 B-5 is that much easier to justify. It's a
19 specific factual correction that B-20 is really
20 the standard fuel in use by fleets today.

21 PRESIDING MEMBER BOYD: I think that's a
22 good point. Bob's question reminded me of a
23 question that I let slip by and that is, the
24 manufacturers, but with exception, which is an
25 exception I think they made for the military, stop

1 at B-5 in terms of what they will warranty.

2 I think it is incumbent upon us to
3 mention that fact. Also mention that the military
4 makes extensive use of B-20 and it has proven
5 mechanically feasible as long as you control the
6 quality of the fuel. And I think that is an issue
7 we have to wrestle with. Thank you very much.

8 DIVISION CHIEF FLETCHER: Thank you.

9 ASSOCIATE MEMBER BYRON: Mr. Friedman,
10 if I may, one more question.

11 PRESIDING MEMBER BOYD: Excuse me,
12 Commissioner.

13 ASSOCIATE MEMBER BYRON: No problem. I
14 think it is intriguing that the military is
15 interested in biodiesel and I really appreciate
16 your comments and your being here. But there's
17 always that sense that the military will do things
18 no matter what the price. Can you tell us what
19 you pay for your biodiesel?

20 MR. FRIEDMAN: Obviously it depends on
21 the market but the last I checked it was within
22 five or ten percent of the normal diesel price.
23 In the last year the price differential between
24 biodiesel and conventional diesel really has
25 disappeared. In some cases biodiesel has actually

1 been cheaper. Again, we're buying it in bulk,
2 we're buying it in -- we have a national fuel
3 contract that is done to these specifications so I
4 suspect we may be getting a better price, contrary
5 to what you might intuitively believe.

6 ASSOCIATE MEMBER BYRON: We'll you're
7 buying about half of the state's biodiesel.

8 MR. FRIEDMAN: Right.

9 ASSOCIATE MEMBER BYRON: So I'd expect
10 you get a good price.

11 MR. FRIEDMAN: And again, I would point
12 out it's not just us but if you look at the city
13 of San Francisco or Berkeley or UC Santa Cruz,
14 there's a number of jurisdictions around the state
15 that are also using B-20. Perhaps not on the
16 scale that we're using but that's why I said --
17 And it's a congressional mandate as well. It's
18 through EAct, it's something that has been set by
19 Congress as a standard in the alternative fuels
20 industry.

21 ASSOCIATE MEMBER BYRON: Thank you
22 again.

23 MR. FRIEDMAN: Thank you.

24 PRESIDING MEMBER BOYD: Daniel Emmett,
25 Energy Independence.

1 MR. EMMETT: Hi. Good afternoon
2 Commissioners and staff of the Air Board and the
3 Energy Commission. Thanks for all your hard work
4 on this. We've enjoyed participating. I am just
5 going to highlight one point really. We've
6 submitted a fair number of comments in writing.
7 And this is just really a point of emphasis that
8 we'd like to make.

9 We appreciate the additions to the
10 errata with regard to the point on infrastructure.
11 And we think that is important because
12 infrastructure challenges are clearly very real.
13 In our experience working on the hydrogen highways
14 as just a recent example, there are large
15 challenges that exist from permitting to siting to
16 who is going to pay for it, who is going to do it.
17 Chicken and egg. And this is not new. Electric
18 vehicle infrastructure as Dave Modisette cited and
19 CNG before that and continuing.

20 So clearly infrastructure, the
21 realities, the practical considerations are very
22 important. And we see them highlighted here sort
23 of throughout in some of the policy measures by
24 fuel. But we would prefer to see infrastructure
25 highlighted as a specific finding in the Executive

1 Summary. So where you have fuels, vehicles,
2 market niches, government actions, we feel there
3 should be an infrastructure section.

4 Because not only are there real needs
5 with regard to retail fueling infrastructure for,
6 as I mentioned, hydrogen, electric vehicles, CNG,
7 but even in the biofuels. We have several hundred
8 thousand flex-fuel vehicles and no ethanol
9 stations in the state and yet they're in the
10 midwest.

11 I know what some of the considerations
12 are here but clearly there are challenges here
13 across the board for infrastructure. And we think
14 it warrants highlighting these and pulling them
15 out of the sections and putting it in right up
16 front. Because it's practical considerations,
17 it's policy, it's siting and it's funding it needs
18 to be called out up front we feel. That's really
19 our only point at this point.

20 PRESIDING MEMBER BOYD: Thanks Dan.

21 MR. EMMETT: Thank you.

22 PRESIDING MEMBER BOYD: I actually did
23 read all the comments sent in by folks and I noted
24 down several comments. I do remember your
25 comment. In fact other people made the same

1 comment. I took a little box score.

2 MR. EMMETT: Thank you.

3 PRESIDING MEMBER BOYD: Obviously that's
4 a point of concern. Todd Campbell, Clean Energy.

5 MR. OLSON: Commissioner, Todd had to
6 leave. I am not sure if his partners want to talk
7 about -- any comments?

8 PRESIDING MEMBER BOYD: Well Mike, I've
9 got a card for you and you happen to be next so if
10 we're disposing of Todd Campbell --

11 ASSOCIATE MEMBER BYRON: Dispensing,
12 dispensing (laughter).

13 PRESIDING MEMBER BOYD: Todd Campbell
14 removed himself from the premises.

15 MR. EAVES: Todd Campbell has been too
16 many places in two days and --

17 PRESIDING MEMBER BOYD: It's too bad.
18 If he'd have said something I might have given the
19 courtesy of talking sooner before he had to leave.
20 And if any of you have a problem send the word up
21 here. I'm just taking them in order but I'm
22 willing to shuffle the deck if anybody has a
23 problem.

24 MR. EAVES: Good afternoon Commissioners
25 and Mr. Fletcher and staffs. I am Mike Eaves with

1 the California Natural Gas Vehicle Coalition. We
2 really appreciate all the hard work that staff has
3 done to kind of capture the essence of our
4 industry. We've had very good dialogues with the
5 staff and we probably want to comment on a couple
6 of items. I'll do one and I'll have Mark Sweeney
7 comment on the other one.

8 The report as it is highlights the
9 economic competitiveness of natural gas, especially
10 in high fuel use fleets. However, the market
11 penetration of light-duty vehicles doesn't reflect
12 the competitive economics for consumers. And we
13 believe that the market penetration in the light-
14 duty vehicles is underestimated by a factor of
15 about ten in the report, even allowing for a
16 factor of a five year transition for OEMs to get
17 back into the market. I think OEMs will come into
18 this market.

19 PRESIDING MEMBER BOYD: Mike, how do we
20 get that signal though that OEMs are coming back.

21 MR. EAVES: You know we've --

22 PRESIDING MEMBER BOYD: I've heard that a
23 lot lately and I know that would make a big
24 difference. But how do we get that signal somehow
25 or another so we can clear up the crystal ball a

1 little bit.

2 MR. EAVES: I think that we have heard
3 personally from two OEMs in the industry that they
4 might be coming back into the market. There's a
5 couple of things going on here. One is the
6 economics, the economics of the fuel. I think
7 when you look at the cost-effectiveness charts
8 towards the rear of the report, page 65 and the
9 other cost competitiveness one, page 68 I believe.
10 Natural gas is a very competitive fuel.

11 We can capture the full cost of
12 developing the infrastructure and offer the
13 customer anywhere from \$1-plus a gallon, you know,
14 lower cost on his fuel. And we're dealing with
15 the high fuel use fleet market so we're talking
16 about vehicles that consume 10,000 to 15,000 to
17 20,000 gallons of fuel a year. And you save \$1 a
18 gallon on that and all of a sudden, you know,
19 you're cost-effective in a two year payback, even
20 with a \$50,000 premium on the vehicle.

21 I think light-duty vehicles are very
22 similar to that because the staff has analyzed the
23 light-duty market. If you do home refueling you
24 can fuel your vehicle for as low as \$1.50 a gallon
25 at home versus retail prices today. So I think

1 the combination of economics of the fuel, which we
2 didn't have two years ago. I mean, we didn't have
3 -- through the whole cycle of OEM involvement we
4 never had the economic argument in our favor. We
5 do now and we probably will in the future.

6 Also we have greenhouse gases. We have
7 manufacturers that could achieve a 20 to 30
8 percent reduction in greenhouse gases today by
9 just fuel substitution. Going from gasoline or
10 diesel to natural gas. And I think that
11 combination of economics, greenhouse gas benefits
12 and what they potentially can gain from the state
13 by early penetration of vehicles into the
14 marketplace is going to be a very big incentive
15 for them to come back.

16 I also -- We discussed this this morning
17 in a brief meeting. That it wouldn't hurt to have
18 a California trade mission to Detroit to talk
19 about the issues of what kinds of vehicles
20 California wants and needs and the types of
21 benefits they offer California in the mix of --

22 PRESIDING MEMBER BOYD: In another life
23 I made a lot of trips to Detroit but I never
24 looked at them as trade missions.

25 MR. EAVES: Well, we have to treat these

1 people as a foreign country maybe. So we think
2 that the economics coupled with greenhouse gas
3 benefits will bring OEMs back in.

4 We have always talked in our
5 presentations before about in Europe we have 14
6 manufacturers offering product in the market. And
7 I left some information this morning that shows
8 that yes we have those 14 manufacturers but they
9 offer 38 different varieties of vehicles in
10 different models. So every manufacturer has got
11 somewhere between three and five vehicles that
12 they are offering and that is going into the
13 consumer market.

14 And they have tax incentives on fuel
15 pricing that make natural gas attractive in Europe
16 but I think we have just natural economics here,
17 not any tax incentives.

18 So I think they can be back. If you
19 factored in the economics and greenhouse gas
20 benefits I think that we see the light-duty market
21 growing. If it grows the way we would project for
22 the moderate scenario we'd have 20 to 30 percent
23 higher fuel displacement in the 2017, 2022 time
24 frame. That percentage won't hold true all the
25 way out into the future but it will end up with a

1 market in 2050 of about three-quarters of a
2 million new vehicles on the road in California.

3 So we think that that's an area. Given
4 the fact that the staff was the one that figured
5 out the economics, the economic scenario and the
6 cost competitiveness it seems to be that they
7 should use that competitiveness to enhance the
8 market penetration of light-duty vehicles similar
9 to what they have done for heavy-duty vehicles.

10 But we appreciate the efforts of staff.
11 We're pretty much in synch with a lot of the
12 issues. We've put comments on the record and we
13 have actually used Blackberries today to send our
14 final, final, final comments that hopefully you'll
15 receive by five o'clock.

16 ASSOCIATE MEMBER BYRON: Thank you.

17 PRESIDING MEMBER BOYD: I wondered when
18 21st Century technology would enter the picture.
19 Thank you, Mike.

20 MR. EAVES: Thank you.

21 PRESIDING MEMBER BOYD: You make a good
22 point. I'm thinking of the diesel people as I
23 listen to this. I am not a great student now of
24 behavioral economics as the great mystery of
25 markets and trying to guess what markets are going

1 to do.

2 If I had to come up with an alternative
3 fuels plan in three days I'd probably go to some
4 simple thought process of what fuels are there out
5 there, what vehicles are there out there now that
6 can use those fuels, what kind of fueling
7 infrastructure is there in existence. What
8 promise is there that we could address any one of
9 those very simplistically and easily and create
10 more.

11 And natural gas has a lot going for it
12 including economics but the light-duty people
13 withdrew everything so the question is -- And I
14 know they make a lot of them in Europe and other
15 places, just like diesels too. So anyway, we'll
16 have to see what Commissioner Byron's and my
17 crystal ball can come up with here as we button
18 this down, thanks. Luke Tonachel.

19 MR. TONACHEL: Good afternoon
20 Commissioner Boyd, Commissioner Byron, Division
21 Chief Fletcher, advisors.

22 PRESIDING MEMBER BOYD: Welcome Luke.

23 MR. TONACHEL: My name is Luke Tonachel,
24 I'm with the Natural Resources Defense Council.
25 As NRDC was an original sponsor of AB 1007 I

1 greatly appreciate all the work of the staff and
2 also of TIAX and all the stakeholders that also
3 have put input into this report. I think it is a
4 tremendous effort.

5 There's a couple of things I wanted to
6 point out that I think, although at the time of AB
7 1007 being passed a low-carbon fuel standard was
8 not in existence.

9 It's really important and I think it
10 makes this report especially relevant in that
11 you've taken into account the other policy goals
12 of the state, meeting the low-carbon fuel
13 standard, the in-state biofuels production goals.
14 And of course we need to continue to do that going
15 forward and continue to make sure that we're in
16 synch with our air quality goals as well.

17 And I appreciate the acknowledgement
18 within the errata of the need to continue to make
19 sure our air quality is improving as we implement
20 these strategies.

21 One of the things in particular that I
22 like about the report is that it sketches out even
23 beyond the targets that were required in the
24 legislation. It sketches out to 2050. You know,
25 we talk a lot about we need to get to this 80

1 percent reduction in greenhouse gas emissions by
2 2050 and it provides some ideas of how we can get
3 there and it is important I think to put that
4 vision in mind. We have to think a lot about how
5 we're going to do it in order to do it right.

6 Tim Olson made an important commitment
7 as to how we continue to update the information
8 and I appreciate that commitment. I think it
9 would be helpful to understand to Tom's point, Tom
10 Fulks' point about how we roll this into the IEPR.

11 It seems like the IEPR is the Commission
12 ongoing process. As we get these updates in for
13 the economic analysis or the life cycle analysis
14 that it gets rolled into that and there is a
15 commitment to roll it into the IEPR on an ongoing
16 basis just to make sure that we're keeping track
17 and people know that the inputs that they are
18 giving going forward are going to continue to get
19 documented.

20 With those high-level comments I want to
21 make one sort of specific comment on some language
22 in the errata. And it is on page two, the third
23 comment down, which would be an errata to the
24 Executive Summary page three. There's language
25 that says:

1 "Using materials from our
2 state's agricultural, forestry, and
3 urban waste streams to produce
4 energy improves forest and animal
5 health --"

6 And I'll stop there. And the point I want to make
7 is that I think it should say something like may
8 improve forest and animal health and the other
9 things. And the point I want to make there is
10 that unless there is something that you can refer
11 me to in terms of documentation that no matter how
12 we go into our forests, for example, and get that
13 biomass that we will be improving that forest
14 habitat.

15 Without that knowledge I think it is
16 important for us to acknowledge that there is an
17 opportunity here, there is a great potential here.
18 But we have to be careful about how we do it. And
19 going forward we need to put the policies in
20 place, whether it is through the incentives that
21 give through AB 118 that make sure that when we're
22 encouraging these uses of new biofuel sources as
23 an example that we are doing it in a way that
24 achieve all of our environmental goals at the same
25 time.

1 And finally I just want to agree with
2 one of the points that Mr. Modisette made. Making
3 sure that the AB 118 work remains complementary to
4 the low-carbon fuel standard and our other state
5 policies. That going forward there is also going
6 to be money available to CARB for air quality
7 improvements. That whatever we're giving grants
8 out to or incentives out to that we're achieving
9 both sort of our petroleum greenhouse gas
10 reduction goals and our air quality goals. So
11 thank you very much.

12 PRESIDING MEMBER BOYD: Thank you Luke,
13 appreciate your persistent participation in the
14 process. I would say that I think staff and the
15 commissioners have bent over backwards to
16 accommodate all the state's goals and objectives,
17 including the low-carbon fuel standard. Part of
18 that is why we're here so late in the year instead
19 of earlier in the year. And we'll strive to
20 continue to do that. But it has become a
21 continuous process. Thanks.

22 Paul Wuebben.

23 MR. WUEBBEN: Good afternoon,
24 Commissioner Boyd, members of the Commission. I
25 am Paul Wuebben with the South Coast Air Quality

1 Management District. We had hoped to have
2 comments --

3 PRESIDING MEMBER BOYD: Don't get
4 yourself quoted in that Washington rag again
5 (laughter).

6 MR. WUEBBEN: I'll do my best to keep it
7 engaging.

8 We would like to say first off that we
9 are very appreciative of the modifications that
10 were made in the errata and recognize that a lot
11 of work was done between the last meeting and this
12 meeting.

13 In light of the fact that the South
14 Coast air basin represents 25 percent of the
15 nation's exposure to violations of the ozone
16 standard, and 50 percent of the violations PM2.5
17 standard clearly air quality in Southern
18 California remains in a very crucial objective
19 regionally and statewide.

20 So we certainly strongly appreciate the
21 consistent and multiple references to air quality,
22 including toxics I noticed in one of those.

23 PRESIDING MEMBER BOYD: I don't think we
24 ever really meant to leave it out. I think some
25 of us take it for granted almost and forgot --

1 MR. WUEBBEN: Yes, we didn't want to
2 be --

3 PRESIDING MEMBER BOYD: I think we all
4 forgot to make sure all the words are there
5 because perception is reality when you read these
6 things. A point well made in the last workshop
7 and everybody rose to the challenge. Some of us
8 do just forget things.

9 MR. WUEBBEN: Yes, and growth in the --

10 PRESIDING MEMBER BOYD: People need to
11 be reminded constantly.

12 MR. WUEBBEN: And the growth in the
13 ports, as you know, continues. Those twin ports
14 of Los Angeles and Long Beach represent 40 percent
15 of the United States containers. So in a very
16 real respect we are the lungs of the United States
17 subsidizing essentially low-cost plasma TVs in
18 Omaha. So yes, we appreciate that you have made
19 that reference. I hope that gets quoted
20 (laughter). Thank you.

21 Secondarily, I would like to reiterate
22 comments we made at the last meeting relative to
23 the role of mandates in addition to incentives.
24 And I appreciate the focus really on incentives
25 and strategies but there is still an important

1 interface with mandates, not just the low-carbon
2 fuel standard.

3 But we think that our targeted fleet
4 rules in the South Coast continue to demonstrate
5 that if you're surgical in combining incentives,
6 regulatory requirements and technology
7 development, that those three things when wedded
8 together can yield a sustainable market
9 introduction.

10 And we expect a continuing application
11 of natural gas engines for example, which are the
12 cleanest of the low-NOx technologies through 2010.
13 We think that with blending of hydrogen, for
14 example, you'd extend that market segment. That
15 model can be extended throughout a variety of
16 alternative fuels.

17 One other thing that I'd like to just
18 mention briefly is that on page 20 the Table 1
19 figure that refers to the investments needed. The
20 public investments identified in this chart, if
21 you add up the federal and state investment, the
22 discretionary funding, this implies that
23 essentially 70 percent of the federal and state
24 funding would be applied to biofuels.

25 And while that may be appropriate on a

1 statewide basis we do find that in the South Coast
2 air basin that plug-in hybrids and natural gas
3 technologies are probably going to have a larger
4 proportional role going forward. So I think
5 looking at that table we would suggest that you
6 clarify that that's not intended to imply the
7 relative share of discretionary funding into those
8 categories. Or perhaps it was driven by some
9 sense of the resource requirements. But just to
10 perhaps qualify that.

11 PRESIDING MEMBER BOYD: Well if people
12 are going to perceive that's the way we're going
13 to suggest spending the money then I think you're
14 point is well said.

15 MR. WUEBBEN: Yes, I think that
16 particularly since it is a Table 1 it's, you know,
17 implicitly the most prominent table. So we felt
18 like some clarification --

19 PRESIDING MEMBER BOYD: We work in a
20 city where perception is reality too.

21 MR. WUEBBEN: Yes. Secondly, and maybe
22 this is in the realm of optics as well but I'm not
23 sure. On page 39 and 48 respectively there's
24 references to E-15 and E-30. And with respect to
25 E-15, clearly that does not meet the test of the

1 predictive model and therefore would not even meet
2 the fairly shallow test of a no-net-material
3 impact in air quality.

4 With that I might parenthetically say
5 that that reference to no material impact, that
6 language in AB 1007 does not in any way obviate
7 the need to meet the share bill, the California
8 Clean Air Act with the federal act. And so it
9 doesn't really affect really the stronger
10 objectives and obligations to meet the standards
11 and not have a degradation of air quality.

12 With respect to E-30. I think we would
13 want -- What we would suggest is that you be
14 careful or perhaps just define what you're really
15 anticipating in that regard. Is it butanol or
16 some other specification? Is it intended for the
17 legacy fleet? We understood from your consultant
18 last time that that is not intended for the legacy
19 fleet. Maybe some clarification about
20 optimization toward that end would be appropriate.

21 And just kind of going forward very
22 quickly. With respect to plug-ins and the whole
23 electric transportation segment. As I mentioned
24 before, that's a very crucial component. We
25 believe that that has a paradigm-shifting

1 capability really with respect to transportation
2 fuels.

3 It's a durable technology. If one likes
4 this notion of durable frameworks it's perhaps the
5 most durable one could imagine. You can integrate
6 it with biofuels, integrate it with hydrogen if
7 that comes. Certainly integrate it with growing
8 capacity in batteries' performance and cost
9 improvements, et cetera. So it really we think
10 should become a focal, a clear focal point in this
11 plan among the other important aspects.

12 Within that segment we would suggest
13 that the recommended fast charge subsidies be
14 restricted, perhaps completely limited to those
15 cases where there are lower tariffs for fast
16 charging. Or I should say off-peak charging. So
17 that we have a clear linkage between off-peak,
18 efficient utilization of the resource, the
19 electricity generation resource.

20 Let's see, with that maybe just one last
21 comment on your hydrogen-related topics. That we
22 recognize that that is a scenario and an important
23 technology over the very long term. We think it
24 would be useful to identify how central the
25 hydrogen bulk storage and on-board storage

1 technology challenge is to the actual achieving of
2 the objectives that are laid out.

3 And we think that certainly ARB and the
4 Commission have a role in expediting, accelerating
5 that, that effort, and that it could be an
6 important addition going forward. So with that I
7 think I just want to conclude that we consider
8 alternative fuels accelerating with respect to the
9 need for them, their market value.

10 We recognize now that the oil to natural
11 gas multiple has grown from six-to-one to nearly
12 eleven-to-one if you look over the last couple of
13 years, it has just been that explosion and that
14 price multiple. So for a variety of reasons we
15 consider this very timely that you take this
16 aggressive action and we stand shoulder to
17 shoulder with you to try to promote the success of
18 your plan. So thank you very much.

19 PRESIDING MEMBER BOYD: Thank you, Paul.
20 I want to ask you a question. This has been a
21 very difficult task because everything we say
22 about anybody's fuel, if it is said in a certain
23 way it is seen as we are doing them dirt to the
24 benefit of somebody else's fuel.

25 You raised a point about hydrogen and I

1 think it's a valid point. I have been on the Fuel
2 Cell Partnership Board for years. You talked
3 about the infrastructure issues, the challenges
4 that they face. And yet I'm wondering if by me
5 having this discussion with you and you making
6 that point our friends in the hydrogen business
7 are going to think you and I are anti-hydrogen or
8 trying to do them dirt.

9 That's a dilemma that the staff in
10 dealing with a lot of these issues. To raise
11 problems is to cast a negative view. I'm just
12 mouthing off here I guess because I guess after a
13 few months I'm frustrated with a lot of this.

14 But we try to -- we will legitimately
15 bring up the hurdles and issues. Since I said at
16 the beginning of this meeting, we may not have any
17 friends in any fuel area any more. I'm beginning
18 to think we must have done something right. We've
19 put all the issues out on the table that need to
20 be dealt with.

21 I'm just taking advantage of you having
22 made that point to make a point that this is, it
23 is difficult to walk a tightrope on these fuels
24 without seemingly doing an injustice to somebody's
25 fuel. But that is a legitimate hurdle and it

1 probably deserves being mentioned.

2 You're close to that subject. You and I
3 sit through lots of the debates. It's a huge
4 issue of how to store the hydrogen.

5 MR. WUEBBEN: Well I might just say that
6 I certainly do it not with any intent to denigrate
7 a crucial, a zero-carbon fuel. In fact our agency
8 is proud, as you know, of operating the first
9 commercial fuel cell, the first beta unit. I
10 believe it was the second beta unit but it was in
11 a commercial application. It operated for 9,000
12 hours. A PAFC unit at our own building.

13 Back in 1993 we were the first to
14 invest, to cost-share a program. A Phase 2 fuel
15 cell bus with Valley. That evolved to a Phase 5
16 bus, which they are now working on international
17 homologation. So yes, we're very deeply vested
18 and committed to a successful, sustainable market
19 in that regard. But I guess that also provides us
20 an obligation, really, to have some degree of
21 pragmatism and also a sense of the realism of the
22 investment hurdle and technology challenges. But
23 we just hope that that sunshine can help I guess
24 motivate us rather than dissuade us.

25 PRESIDING MEMBER BOYD: The point is

1 well made but that won't be a quote in the rag
2 (laughter). Thanks, Paul.

3 DIVISION CHIEF FLETCHER: Paul, I have
4 -- Paul.

5 MR. WUEBBEN: Yes.

6 DIVISION CHIEF FLETCHER: I have a few
7 questions. You referenced the E-15 and E-30 and
8 you gave a couple of page numbers for those
9 references.

10 MR. WUEBBEN: I believe it's on page 39
11 and page 38 and -- Let me get the report so I --

12 DIVISION CHIEF FLETCHER: Okay, I got
13 you.

14 ASSOCIATE MEMBER BYRON: Paul, I think
15 it's in the first paragraph on page 39.

16 PRESIDING MEMBER BOYD: I'm a little
17 sensitive to that remark because as many people
18 working on this -- not sensitive to it but take it
19 unkindly. Because I think as Mike Scheible will
20 remember, even if he's hiding out in the audience
21 there, as we struggled through all this and worked
22 with our consultant and everything else on all the
23 various scenarios. And we debated long -- we
24 discussed and maybe debated long and hard about
25 E-X, you know.

1 E greater than ten has all kinds of
2 possibilities. But we pretty well made a policy
3 decision to stop at E-10 for the state. And I
4 have been saying that in speeches around this
5 country that I don't see California in the near
6 future going beyond E-10 for environmental air
7 quality reasons, as you state.

8 While these fuels, higher load blends
9 are talked about they're not much on the table for
10 us in California. I guess it doesn't hurt to make
11 mention that we're quite, you know. We know about
12 these things, we're not blind or oblivious to the
13 fact that there are lots of other possible blends
14 and they have attributes as well as many
15 downsides.

16 MR. WUEBBEN: It's page 39.

17 PRESIDING MEMBER BOYD: So in any event
18 we'll make sure that the perception doesn't become
19 reality.

20 MR. WUEBBEN: I believe it's page 38 and
21 page 39 and page 48.

22 DIVISION CHIEF FLETCHER: Because I
23 think we had tried, we had talked about removing
24 that at one point, that 15 percent. I think we
25 just didn't get to it.

1 PRESIDING MEMBER BOYD: It may well have
2 slipped through the cracks. Okay.

3 MR. JACKSON: Commissioner Boyd, just to
4 say a couple of comments on that.

5 PRESIDING MEMBER BOYD: Here is
6 Mr. E-30.

7 MR. JACKSON: No, no.

8 DIVISION CHIEF FLETCHER: Well we
9 clarified that too, the E-30 actually.

10 MR. JACKSON: But recall that in trying
11 to estimate what the benefits were we needed some
12 way of doing that. And we used E-15 and E-30 as
13 the surrogate for whatever this biofuel
14 potentially that may be developed in the future to
15 be blended into gasoline at those higher levels.
16 So you have to be a little bit careful about the
17 context of that.

18 PRESIDING MEMBER BOYD: You're exactly
19 right, that's a good point. We were debating
20 technology versus perception. In Sacramento
21 people read things. Brian Bonner, Air Products
22 and Chemicals.

23 TELEPHONE MONITOR: He no longer has any
24 comments at this time.

25 PRESIDING MEMBER BOYD: Was that a phone

1 individual?

2 TELEPHONE MONITOR: Yes.

3 PRESIDING MEMBER BOYD: Thank you.

4 How about Danielle, I can't read it,
5 Fugere.

6 MS. FUGERE: Yes, good, thank you.

7 PRESIDING MEMBER BOYD: How badly did I
8 butcher your name, Danielle?

9 MS. FUGERE: No, you did a great job.
10 Danielle Fugere, Friends of the Earth. Good
11 afternoon. And again I'd like to echo the thanks
12 for all of the hard work that has gone into this.
13 It has been a long road but I think it is a good
14 product. And I, we submitted comments which I
15 won't go over here.

16 And in fact Luke touched on both
17 comments that I wanted to make but I wanted to
18 more strongly emphasize that the statement on page
19 two of the errata is too broad. And I think it is
20 over-broad in the sense of using materials. Well
21 what materials. Are we talking about old growth
22 materials? There is just a wide range of --

23 I think that statement in itself has to
24 be qualified. Because I have been in stakeholder
25 meetings where certain industries have said, well

1 sure, we would like to use old growth forests to
2 fuel our cars if we could do that. So that -- And
3 then under what circumstances would the removal of
4 certain materials reduce catastrophic fire risk?

5 It's limited circumstances. So I
6 wouldn't say it's an under all circumstances, for
7 instance. It's been demonstrated recently that
8 thinning forests in certain circumstances
9 increases fire risk. So an overgrown forest, yes,
10 reduction of fuels reduces fire risk. But if
11 you've got a forest, depending on how large the
12 materials you're taking, you'll actually increase
13 fire risk because you're opening up the forest
14 creating more growth of underbrush. That
15 statement is just over-broad.

16 And also, how much removal is good for
17 the ecosystems? For instance, if you clear all of
18 the underbrush you've removed habitat. So I would
19 just ask that that statement be qualified
20 significantly.

21 And then secondly I also appreciate
22 hearing that this process is going to move forward
23 in some extent. Because I don't think either the
24 low-carbon fuel standard or AB 118 fulfill the
25 over-arching planning role that this 1007 process

1 has done. And I think that we need to step back
2 as a community and think about what we are going
3 to fund. And I don't think AB 118 is going to
4 provide that.

5 We're going to ask, requests for
6 proposals will be made and we'll be looking at
7 specific projects. But it is important to look,
8 to take new information into account and all plans
9 have to be revisited to keep them current so I
10 think that's important. Thank you.

11 PRESIDING MEMBER BOYD: Thank you. Mark
12 Sweeney.

13 MR. SWEENEY: I'm Mark Sweeney and I am
14 a consultant working with the California Natural
15 Gas Vehicle Coalition. And there are just a few
16 comments I would like to ask you to consider that
17 build off of Mike Eaves' remarks.

18 One is that as I understand it, the
19 examples that are in the document now are intended
20 to simply illustrate that there is a combination
21 of alternate fuel technologies which can go a long
22 way in achieving the petroleum dependance
23 reduction goals and the greenhouse gas emission
24 reduction goals.

25 But I think there is a real significant

1 danger that people are going to, when they look at
2 those, are going to interpret those to be
3 predictions of market success. And I was at a
4 CARB low-carbon fuel standards workshop earlier in
5 the day where the concern I had was supported when
6 the lead individual for CARB was basically saying
7 that the AB 1007 report was predicting that plug-
8 in hybrids were going to be a winner. And I think
9 the only way that that would come out of the
10 interpretation is from looking at the examples.

11 So I think if the intention is that the
12 examples simply illustrate the potential to
13 achieve our broad policy goals that it be made
14 very clear that these don't represent CEC
15 predictions of market success and market failure.
16 Because there is a very high risk that they will
17 be interpreted as such.

18 And then secondly, one of the expressed
19 criterion in the AB 1007 legislation was that the
20 plan that you were tasked with developing
21 minimized economic cost to the state. And the way
22 things are now, especially when you look at the
23 examples, you're showing a very high market
24 penetration of the technologies that have the
25 highest capital costs, the lowest cost-

1 effectiveness and the longest or no consumer
2 payback period based on the economic analysis in
3 the report.

4 And we believe by showing a combination
5 of technologies that there is an opportunity that
6 is being missed which would be responsive to the
7 legislative intent that the plan achieve a
8 minimization of economic costs.

9 And we would recommend that you would
10 consider adding a fourth example to the packet of
11 examples, there are three now, that would reflect
12 a much higher market penetration of the
13 technologies that your own economic analysis
14 showed to be most cost-competitive, to have
15 reasonable capital costs to achieve petroleum
16 displacement and to have very short consumer
17 payback periods, namely natural gas vehicles, and
18 a lower market penetration of some of the highest
19 cost technologies that are reflected in the three
20 existing examples now. So I would ask that you
21 consider these suggestions.

22 PRESIDING MEMBER BOYD: Thanks, Mark, a
23 point well made.

24 ASSOCIATE MEMBER BYRON: Excuse me,
25 Commissioner. Between the times Mike Eaves spoke

1 and Mr. Sweeney spoke we did get their comments
2 via electronic --

3 PRESIDING MEMBER BOYD: I haven't even
4 bothered to look at my Blackberry, crackberry.

5 Okay, that was the last of the blue
6 cards. So is there anyone else out there who
7 would like -- Here comes one. Somebody is on the
8 phone? No.

9 Jay, Jay McKeeman, CIOMA. Here I
10 thought you left but you came back in the room and
11 I didn't catch that.

12 MR. McKEEMAN: I just had to say goodbye
13 to Joe. Jay McKeeman with the California
14 Independent Oil Marketers Association. I think
15 the additions have done a good job of trying to
16 combine a lot of different and changing policy
17 areas so commendations to the staff for putting
18 this together in actually a reader-friendly way.

19 One very short comment. On page three
20 of the additions under the biodiesel section,
21 first bullet. Develop an incentive for
22 infrastructure improvement. And I would request
23 that we put, at large and small bulk distribution
24 terminals.

25 The reason I am requesting that is I

1 spent the better part of this year working on
2 AB 118 and there is a provision in AB 118 that
3 allows for distribution of funds for the purposes
4 of alternative fuels infrastructures. And we
5 spent a good part of that year making sure that
6 CIOMA members might be able to qualify for that.
7 So I just want to make sure that that hard work
8 isn't lost in the translation in terms of the
9 ability of AB 118 funds to be used.

10 This is especially important in
11 biodiesel where our members are the primary
12 distributors other than the military of biodiesel
13 in the state. And having the ability to put in
14 additional storage and blending capability for
15 biodiesel I think will help really increase the
16 use of that product throughout the state and
17 eliminate a potential hindrance in getting that
18 fuel distributed. That's it, thank you very much.

19 PRESIDING MEMBER BOYD: Thank you, Jay.
20 Good point.

21 Okay, again as I said, no more blue
22 cards. Is there anyone out there who would like
23 to make some comments? Any comments from the
24 staff then?

25 MR. OLSON: Only one little thing I'd

1 like to mention, it's a request from Commissioner
2 John Geesman regarding natural gas. He has asked
3 us to look at what the impact of the moderate
4 growth scenario that we used in our analysis is on
5 the natural gas supply in the state.

6 And we're going through that with the
7 electricity/natural gas office to take these
8 calculations and look at that. What the
9 consumption is, what that means to the overall
10 system. We think it is very small but we want to
11 confirm that for inclusion in this report and also
12 in the IEPR, the 2007 IEPR.

13 PRESIDING MEMBER BOYD: Okay, thank you.
14 I will venture to guess that it is awfully small
15 but I think the question is a good question for
16 obvious, strategic reasons. I'm glad you're doing
17 that.

18 Okay, well I am going to make a few
19 concluding remarks and invite Commissioner Byron
20 to do the same.

21 As I said at the beginning of the day
22 the Committee will indeed consider the comments
23 received in today's workshop or electronically or
24 any other way that they get here by the deadline
25 established. And there's what, eight more hours

1 in that deadline, midnight tonight. When is your
2 deadline?

3 MR. OLSON: Five o'clock.

4 PRESIDING MEMBER BOYD: You know you're
5 better than that, Rosella, you know you'll take
6 them up to midnight tonight.

7 MS. SHAPIRO (FROM THE AUDIENCE): One
8 hour and five minutes (laughter).

9 PRESIDING MEMBER BOYD: In any event, we
10 will take your comments into consideration in
11 developing our final report that will be presented
12 to the Commission on Halloween. How appropriate.

13 As I said in the beginning the plan is a
14 conceptual one by nature. And I know that doesn't
15 satisfy lots of people's needs for incredible
16 specificity. But those who have listened in to a
17 lot of this see how difficult this task is and how
18 there may be some downsides to at this point in
19 time being painfully specific. And I think AB 118
20 is going to help in lots of different ways,
21 including giving us a continuous forum to work on
22 this as well as start getting a little specific
23 about issues.

24 AB 118 is going to require just a
25 continuation of the significant partnership and

1 effort that has taken place between the two
2 agencies represented here because there's an air
3 quality improvement program within that bill and
4 there's the alternative renewable fuel vehicle
5 technology program within that bill to be
6 administered by this agency.

7 And I really think that's great. A sign
8 of progress and recognition that I think the
9 agencies have recognized for decades, that you
10 can't separate energy development and use from
11 environmental issues, particularly air quality
12 issues. So it was quite a struggle getting that
13 bill but it is now law.

14 One other comment on AB 118 coming from
15 this very old bureaucrat, civil servant. I have
16 really been disappointed with the nastiness of the
17 debate and allegations that have gone through that
18 process. Allegations against state agencies and
19 against the staff. But particularly of this
20 agency and the distrust and lack of confidence
21 that a lot of these comments have shown.

22 You know, they're already talking about
23 clean-up legislation to fix all the mistakes that
24 were made with regard to the authorities given the
25 Energy Commission. At a point in time when the

1 Energy Commission has hardly said any words yet
2 about what the plan for the future is going to be.

3 Or the allegations that this was a
4 wired-in deal to make sure that most of the money
5 goes to a certain, existing fuel and technology
6 out there, which couldn't be farther from the
7 truth. It has been very interesting to read a lot
8 of the press and notice the amount of fact
9 checking that took place or the stories about
10 historical programs that were 100 percent
11 incorrect. But I guess some oxes were getting
12 gored somewhere people thought and that is the way
13 it is.

14 In any event I expect our two agencies
15 to move forward in the manner we have moved on
16 this and fulfill our responsibilities under that
17 program, always being cognizant of all the things
18 that this report says about protecting the
19 environment completely and reducing our dependance
20 on petroleum and having a mixed portfolio of fuels
21 for a host of good reasons.

22 Anyway, I look forward to looking with
23 all you folks into the future on this. I
24 appreciate all the well-meaning remarks that have
25 been made here today and we'll do the best we can

1 to take them into account to produce a plan,
2 barely in the nick of time I'm sure, for a hearing
3 before the full commission in this room next
4 Wednesday.

5 But I am very pleased with what I've
6 seen. Being around as long as I have in the fuels
7 business, knowing how hard this was going to be,
8 it was that hard and I think people have done a
9 good job and have learned a lot in the process.
10 So I thank you all.

11 Commissioner Byron, anything you would
12 like to say? And Mr. Fletcher, I will not leave
13 you out this time.

14 ASSOCIATE MEMBER BYRON: Very briefly.
15 I would like to thank all of you that were here
16 today for your comments, the comments that we've
17 received to date. We take these very seriously.
18 We met this morning and discussed some of these
19 things. I know that we have also agreed to make
20 some additional changes to the errata already that
21 you've seen this morning that I think we just saw
22 last night for the first time.

23 But we are close and we will be
24 presenting a document for Commission approval next
25 week. I am very optimistic that that's the case.

1 Just a little bit more midnight oil to burn. But
2 again, we'll save the accolades for the staff for
3 later. It is really all the input and the short
4 time schedule. Although this is our sixth
5 workshop on this report, the short time schedule
6 that you all had in providing us comments today.
7 We appreciate that very much, thank you.

8 PRESIDING MEMBER BOYD: And one quick
9 comment. We will see that to the best of our
10 ability that the Integrated Energy Policy Report
11 and this document are consistent with each other.
12 I will confess to having been very negligent and
13 not keeping up with the Integrated Energy Policy
14 Report in deference to getting this report done.

15 So, Bob.

16 DIVISION CHIEF FLETCHER: No, I'm good.

17 PRESIDING MEMBER BOYD: Thank you
18 everybody. I guess we can adjourn the workshop.

19 (Whereupon, at 4:00 p.m., the Committee
20 Workshop was adjourned.)

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CERTIFICATE OF REPORTER

I, DEBI BAKER, an Electronic Reporter, do hereby certify that I am a disinterested person herein; that I recorded the foregoing California Energy Committee 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.