ADVISORY COMMITTEE WORKSHOP

BEFORE THE

CALIFORNIA ENERGY COMMISSION

In the Matter of:	)	
	)	
Implementation of Alternative and	)	Docket No.
Renewable Fuel and Vehicle	)	08-ALT-1
Technology Program	)	
_____	)	

CALIFORNIA ENERGY COMMISSION

HEARING ROOM A

1516 NINTH STREET

SACRAMENTO, CALIFORNIA

WEDNESDAY, JULY 9, 2008

10:14 A.M.

Reported by:
Peter Petty
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CALIFORNIA ENERGY COMMISSION

James D. Boyd, Vice Chairperson
Presiding Member Transportation Committee

Karen Douglas, Commissioner
Associate Member Transportation Committee

CEC STAFF PRESENT

Susan Brown

Mike Smith

Peter Ward

ADVISORY COMMITTEE PRESENT

Michael Walsh
International Council on Clean Transportation

Peter Cooper
California Labor Federation

Roland Hwang
Natural Resources Defense Council

Daniel Emmett
Energy Independence Now Coalition

Tim Carmichael
Coalition for Clean Air

John Shears
Center for Energy Efficiency and Renewable
Technologies

Bonnie Holmes-Gen
American Lung Association

Patricia Monahan
Union of Concerned Scientists

Tom Frantz
Associate of Irritated Residents

ADVISORY COMMITTEE PRESENT

David Geoffrey (via teleconference)
Southern California Marine Association

Elisa Odabashian
Consumers Union

Jim Sweeney
Precourt Institute for Energy Efficiency

Brett Williams representing Dan Kammen (via teleconference)
Renewable and Appropriate Energy Laboratory (RAEL)
Berkeley Institute of the Environment
University of California, Berkeley

Carla Din
Apollo Alliance

Allan Lind representing Gerald Secundy
California Council for Environmental and Economic Balance

Will Coleman
Mohr Davidow Ventures

Jay McKeeman
California Independent Oil Marketers Association

Tom Cackette
California Air Resources Board
California Environmental Protection Agency

Karnig Kazarian
Business Transportation and Housing Agency

Doug Hoffner (via teleconference)
Labor and Workforce Development Agency

Mike Chrisman (via teleconference)
Resources Agency

Anthony Brunello
California Air Resources Board
California Resources Agency

Richard Shedd
Department of General Services

ADVISORY BOARD PRESENT

Jananne Sharpless
Public-at-Large

ALSO PRESENT

Michael Jackson
TIAX, Inc.

Tim Condon
Clean Fuel USA

Tom Fulks
Neste Oil

Jaimie Levin
Alameda-Contra Costa Transit

Stephen Kaffka
California Biomass Collaborative
University of California Davis

Eric Castillo
GoGreen Biofuels

Nathalie Hoffman
California Renewable Energies

Catherine Dunwoody, Executive Director
California Fuel Cell Partnership (CAFCP)

David Modisette
California Electric Transportation Coalition

Mike Stephenson
IVC Systems

Joe Chaperena
Sustainable Conservation

Bill Bunnell
Bunnell and Almanns Petroleum

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

2 10:14 a.m.

3 VICE CHAIRPERSON BOYD: I tend to let

4 the 10- to 15-minute professorial time period go

5 by to start meetings. We're going to have such a

6 broad, diverse group of people, many of whom have

7 come from fair distances to get here, to make sure

8 we have a maximum number. It looks like we've got

9 almost everybody, almost everybody on the Advisory

10 Committee present and at the table. And I thank

11 you all for being here.

12 Just for the record, this is the second

13 Advisory Committee meeting for the alternative and

14 renewable fuel and vehicle technology program,

15 known affectionately as the AB-118 Advisory

16 Committee for shorthand purposes.

17 And everybody has seen the notice in the

18 past, I'm sure; and knows why it is we're here.

19 And everybody got quite a bit of background at the

20 last meeting. There are -- in a moment I'll have

21 you all introduce yourselves again to the

22 physically present audience and to the audience we

23 have on the phone and the WebEx.

24 I'm aware of at least one Advisory

25 Committee Member who will probably introduce

1 himself, if he's on the phone, when we go round,
2 who wasn't able to be here at the last minute.
3 And Dr. Stephen Clark sent me an email
4 last night from the United Kingdom indicating that
5 he had had every intention of being here, but
6 matters kept him there. So he sent an email with
7 some points and either Mike Smith or Peter will
8 reference under Advisory Committee discussion
9 later on. Just so you all have the benefit of
10 input from a fellow Advisory Committee Member.
11 So, for the record, I'm Jim Boyd, Vice
12 Chair and Chair of the Transportation Committee,
13 and ended up chairing this august group. And it's
14 a pleasure to do so. And I'm joined by
15 Commissioner Karen Douglas who is the Associate
16 Member of the Transportation Committee. And I'll
17 ask her for any introductory remarks in just a
18 moment.
19 And then we'll go around the table for
20 introductions. I'll just say that the subject
21 that we're all dealing with here, that is
22 alternative and renewable fuels and vehicle
23 technology were very relevant when AB-118 was
24 passed. Very relevant to us, because AB-1007
25 asked this agency and the Air Resources Board to

1 prepare alternative fuels plan.
2 Very relevant because the Integrated
3 Energy Policy Reports of this agency dating all
4 the way back to 2003 have brought up the dilemma
5 of supply versus demand for transportation fuel.
6 And the first ARB/CEC effort, called the AB-2076
7 report in the year 2003, that kind of was a
8 clarion call to -- we got a problem facing us here
9 in California, if not the U.S. and the world.
10 And I guess the price we all pay at the
11 pump today is the sorry and sad result of what a
12 lot of us felt was coming. And it's here. And so
13 the need to deal with this issue and move forward
14 rapidly is painfully evident. Not just because
15 gasoline costs more and it hurts us all at the
16 pump -- to some that helps stimulate the need for
17 pursuing alternatives -- but because it ripples
18 through the economy in very interesting ways.
19 Which we're finding out, sadly in some cases,
20 maybe sadly in many cases in terms of the costs of
21 goods and services that everybody has to pay for.
22 Setting aside the debate about direct and indirect
23 land use impacts and the impacts on food versus
24 fuel, et cetera, et cetera.
25 So, in any event, it is an extremely

1 important issue that we're dealing with, and its
2 an extremely important thing that we invest the
3 scarce resources we have in the best possible
4 manner to bring us the greatest possible relief to
5 all the issues and goals that are set out in law,
6 executive order or pronouncements of the
7 Legislature and the Governor.
8 So, with that, Commissioner Douglas,
9 would you like to say a few words. Then we'll do
10 the introductions.
11 COMMISSIONER DOUGLAS: Well, just very
12 briefly I'd like to welcome the Advisory Committee
13 Members here and the members of the audience. We
14 appreciate everybody's participation and look
15 forward to the session today. Thanks.
16 VICE CHAIRPERSON BOYD: Okay, Bonnie,
17 why don't we start at your end of the table, if
18 you would, and just introduce yourself and your
19 affiliation for those in the room and those
20 listening in to us.
21 MS. HOLMES-GEN: Bonnie Holmes-Gen;
22 Senior Policy Director with the American Lung
23 Association of California.
24 MR. HWANG: Roland Hwang with the
25 Natural Resources Defense Council.

1 MR. SHEDD: Richard Shedd with the
2 Department of General Services, Acting Chief at
3 the Fleets Administration.
4 MR. McKEEMAN: Jay McKeeman, California
5 Independent Oil Marketers, representing fuel
6 distributors and wholesalers in the state.
7 MR. KAZARIAN: Karnig Kazarian,
8 Assistant Secretary for Economic Development at
9 the Business, Transportation and Housing Agency.
10 MR. WALSH: Good morning. Mike Walsh,
11 Consultant on motor vehicle issues.
12 MS. DIN: Carla Din with the Apollo
13 Alliance.
14 MR. COOPER: Peter Cooper with the
15 Workforce in Economic Development Program at the
16 California Labor Federation.
17 MR. CACKETTE: Tom Cackette, the Air
18 Resources Board.
19 MS. MONAHAN: Patricia Monahan, Union of
20 Concerned Scientists.
21 MS. ODABASHIAN: Elisa Odabashian, West
22 Coast Director of Consumers Union, a nonprofit
23 publisher of "Consumer Reports" magazine.
24 MR. BRUNELLO: Tony Brunello with the
25 California Resources Agency.

1 MS. BROWN: I'm Susan Brown; I'm a
2 Senior Policy Advisor. I work for Commissioner
3 Boyd.
4 MR. LIND: I'm Allan Lind; I'm here on
5 behalf of Gerald Secundy who is the President of
6 the California Council for Environmental and
7 Economic Balance. And Gerry regrets a European
8 vacation interfered with his ability to --
9 (Laughter.)
10 MR. LIND: -- to be here today.
11 VICE CHAIRPERSON BOYD: No sympathy in
12 this audience.
13 MS. SHARPLESS: Jan Sharpless, currently
14 a consultant; formerly an Energy Commissioner and
15 Chair of the Air Resources Board, formerly.
16 MR. COLEMAN: Will Coleman, partner at
17 Mohr Davidow Ventures.
18 MR. EMMETT: Daniel Emmett with Energy
19 Independence Now.
20 MR. FRANTZ: Tom Frantz, Association of
21 Irritated Residents, southern San Joaquin Valley.
22 MR. CARMICHAEL: Tim Carmichael with the
23 Coalition for Clean Air.
24 MR. SHEARS: John Shears, Research --
25 the Center for Energy Efficiency and Renewable

1 Technologies.
2 VICE CHAIRPERSON BOYD: Now, let me ask
3 if any Advisory Committee Members are listening in
4 the phone and able to communicate with us.
5 MR. SWEENEY: Yes, this is Jim Sweeney,
6 Director of the Precourt Institute for Energy
7 Efficiency, Stanford University.
8 VICE CHAIRPERSON BOYD: Morning, Jim.
9 Anyone else?
10 Okay. Jim was the only one I was aware
11 of was going to be on the phone.
12 Well, thank you, all, for your
13 attendance here today and your willingness to
14 dedicate your scarce time to this subject for us.
15 We very much appreciate it.
16 And with that, I guess I'm just going to
17 follow the order of the agenda that I was just
18 presented. It calls on investment plan overview
19 by Peter Ward. Peter.
20 MR. WARD: Thank you, Commissioner Boyd,
21 thank you, Commissioners and our august group of
22 Advisory Committee, those that are here and those
23 that aren't. I understand that Brett Williams is
24 representing Dan Kammen, is on the phone, as well.
25 MR. WILLIAMS: Yes, thank you.

1 VICE CHAIRPERSON BOYD: Oh, good
2 morning, Brett.
3 MR. WARD: Good morning. I am Peter
4 Ward; I'm the Project Manager for the AB-118
5 program here at the Energy Commission. Also like
6 to recognize our partners in 118. From the Air
7 Resources Board there's Andy Panson, who's the
8 Director for the Air Resources Board program, and
9 Jack Kitowski, working on the program, as well.
10 Looking around the group here I see a
11 lot of very familiar faces that we've had
12 association over many many years. And I won't go
13 through how many years, but it's a very august
14 group with a lot of collective experience. And
15 I'm happy to be here with you this morning.
16 I was present at the first meeting of
17 the Advisory Committee, and I have reviewed the
18 transcript, as well, from the meeting. And I'm
19 hoping that we can really attend to the business
20 at hand today, and that would be the draft
21 investment plan.
22 I probably should emphasize the word
23 draft. This is a draft investment plan. We
24 wanted to provide something for the Advisory
25 Committee to look at and to reflect on and to

1 remark on.
2 It is not nearly the final, and we
3 anticipate that. We anticipate a good healthy
4 discussion today. I look at this group as kind of
5 our extended team here at the Energy Commission.
6 And we're hoping that we can all move forward in
7 that collective manner.
8 I thank you all for serving on this
9 Advisory Committee. I know you folks are making
10 sacrifices, you all have other things to do. And
11 now some have given up different things to be here
12 with us today. and those that are listening on
13 the phone, as well; I appreciate that very much.
14 I just want to mention a couple of
15 things before we get started. And one of them is
16 that over the past couple of months since the
17 first advisory meeting we may have been perhaps
18 not quite as visible as many of all of us would
19 have liked. Please understand that we have been
20 busy doing the things that resulted in yesterday's
21 workshop on the regulatory concepts and
22 sustainability specifically, that we've been
23 addressing. And drafting this investment plan
24 through very many iterations.
25 I want to say that we hope to be more

1 visible in the future, and I think we will be. I
2 think it's only right that we do that, and that
3 you folks can check in on our progress as we go
4 forward on an updated basis.
5 I would also like to point your
6 attention to that we have a new website here at
7 the Energy Commission. The website is new and
8 we're hoping that we can incorporate some of the
9 news from this program on that, on an updated
10 basis. That would be one of the many vehicles
11 that hopefully we can utilize to keep everybody
12 informed, not just the Advisory Committee, but all
13 stakeholders and members of the public, as well.
14 In addition, I'd like to say that while
15 I appreciate you folks being here today, we do
16 want to continue your involvement throughout the
17 year, after the investment plan is adopted here at
18 the Energy Commission. We'd like to keep you
19 updated in that manner so that you can stay a part
20 of our team as we go forward. We will try and be
21 as transparent as we can with our process, and
22 basically vowing to keep you as informed as we
23 possibly can.
24 My phone number isn't on this
25 presentation, but I'm pretty easily reached; and

would look forward to any personal contacts you'd like to make to me. So that's my extension to you for that.

The program goal for AB-118 is clearly stated in the legislation and the statute is the goal of the alternative fuel and renewable -- alternative and renewable fuel vehicle technology program is to develop and deploy innovative technologies that transform California's fuel and vehicle types to help the state's climate change policies.

I'd like to state right now I apologize that this was not more prominent in the investment plan draft that you have before you. This has always been foremost in our mind. We are trying to come up with an investment plan that balances many policies, and that's not an excuse, because this is the overarching program goal for this program.

I just want to mention that we are going to be trying to use this mechanism to balance many of the policy objectives's goals and benefits that the state has declared. And it will be in subsequent versions of the investment plan, as well.

1 Those many policies are stated in this
2 slide right here. They are many, and so you can
3 maybe well understand how this will be somewhat of
4 a balancing act. AB-118 is very ambitious and it
5 is very complex. Therefore the program will seek
6 a balance and achieve many of the state policy
7 goals and provide the benefits that were derived
8 from those goals.
9 AB-118, though, affords California what
10 I believe is an unprecedented historic opportunity
11 to achieve these many goals with the urgency we
12 all identify and feel today.
13 First of all I'd like to speak to the
14 Global Climate Change Solutions Act of 2006, which
15 was historic and unprecedented, by itself. In
16 that it establishes the first of the world
17 regulatory and market-based program to achieve
18 real, quantifiable and cost effective GHG
19 reductions; and creates a statewide GHG emission
20 limit to reduce emissions to the 1990 levels by
21 the year 2020.
22 I think our friends at the Air Resources
23 Board consider this as a first step of many that
24 will come. This designates the ARB as the state
25 agency charged with monitoring regulatory -- and

1 regulating those sources of GHG emissions.
2 This Climate Solutions Act also favors
3 market mechanisms. And I believe if we were to
4 define this program as we are looking forward,
5 this could be one of the premiere market
6 mechanisms that can help with the regulatory
7 scheme for the Global Climate Solutions Act of
8 2006, as well.
9 Another of the policy goals that we are
10 incorporating into this program is the bioenergy
11 goals that were established by the Governor's
12 executive order; establish targets to increase
13 instate production of bioenergy and biofuels.
14 Release the Energy Action Plan in 2006, July. And
15 the Bioenergy Interagency Working Group is still
16 continuing to operate within the state agencies to
17 perfect this and to bring about those goals.
18 One of the most important goals of that
19 was the state would produce, within our state, 20
20 percent of the biofuels that we currently use in
21 the state. Actually that would be by 2020. And
22 that's an ambitious goal, but that is one that I
23 think we can address directly. If not necessarily
24 in the first year, but in this program.
25 California's low carbon fuel standard

1 was established on a very very cold day in January
2 of 2007. If any of you were there you know how
3 cold that really was that day. The Governor
4 issued the executive order S-107 establishing the
5 world's first low carbon fuel standard for
6 transportation fuels.
7 Petroleum refiners, gasoline sellers and
8 fuel suppliers must reduce the carbon content of
9 their fuels by 10 percent by 2020. By regulating
10 carbon fuel content this standard will support the
11 state's greenhouse gas reduction targets while
12 promoting the use of alternative fuels.
13 This is a good segue and look in the AB-
14 118, as well. So these things are inextricably
15 joined, as far as I see. Adding ethanol or other
16 biofuels to gasoline is one option for meeting the
17 standard. Advanced biofuels show promise and will
18 be carefully watched in the future, as well.
19 California Air Resources Board expects to complete
20 this rulemaking by late 2008.
21 Next is the state alternative fuels plan
22 that was adopted by the Air Resources Board and
23 the California Energy Commission in December of
24 '07. And this is, the joint plan will expand the
25 use of alternative fuels in California to meet the

1 goals that were previously established.
2 The low carbon fuel standard alone
3 cannot achieve all of the needed greenhouse gas
4 reductions. A combination of regulations or
5 standards, financial incentives and advanced
6 technology is needed to achieve these policy
7 goals.
8 Again, this is a very good complement to
9 the goals that were in that plan. This program is
10 well on its way to provide the means to achieve
11 those goals.
12 Substantial public and private
13 investment is needed for vehicles, fueling
14 infrastructure and advanced technology. And the
15 three-part strategy of advanced technology,
16 alternative fuels and travel reduction was
17 recommended in that report.
18 This basically is the problem that we
19 all are a little bit too keenly aware of. This is
20 California's petroleum and alternative fuels
21 demand. The green sliver is the work cut out for
22 us for alternative fuels. You can see that it is
23 a very very small portion of the entire pie. This
24 is a visual representation of what we are up
25 against at this point.

1 Alternative fuel use goals. As
2 established in the alternative fuels plan,
3 basically we believe that we could achieve 26
4 percent alternative fuel use by 2022. And that
5 would be about 4.8 billion gallons in that year.
6 That equates to an additional 400 million gallons
7 reduction in use of alternative fuels annually.
8 That's an increased annually 400 million gallons.
9 That's roughly over 1 million gallons per day
10 increase.
11 So you can see this is a very very
12 overwhelming goal to achieve. And I think it's
13 going to need this team to do that. I think we're
14 well on our way. This AB-118 may provide the
15 first, and maybe there will be other mechanisms to
16 help us achieve those goals.
17 In addition to that, the AB-2076 report
18 set out a petroleum reduction goal of 15 percent
19 by 2022. And we can use alternative fuels, but we
20 will also be relying on improved vehicle
21 efficiency and reduced vehicle miles traveled,
22 VMT, a most pernicious goal to achieve in our
23 society here in California.
24 The plan's conclusions were several.
25 And one is that through sizeable investments, but

in a moderate case, we estimated that it would be between $100 million to $200 million of state support to achieve those goals by 2022.

Nearly all of the alternative fuels are 10 percent lower carbon now. And lower in criteria pollution, as well. And that is now before 2020.

Here is a chart from the report that shows the fuel use projections that I stated. And they're broken out by the fuels that we evaluated. It also shows the value of GHG avoided. This is an eye chart for all the people in the room; it's also in the materials you've been provided today. It's in the investment plan, as well.

So you can see there are significant increases of alternative fuels and reductions of GHG as we go along, increasing on a gallon-by-gallon equivalent basis.

The alternative fuels incentive program that was co-planned by the ARB and the CEC, and now is administered by the ARB in the 2006-2007 timeframe is a useful example for us here at the Commission as we plan our program for AB-118. It is the most current similar incentive program and is useful for our program planning.

1 Proposals. It's interesting to note, I
2 think that I'm feeling this already. My phone is
3 ringing off the hook. I don't think it's my hair
4 style or anything, I think it's just that there's
5 some money out there.
6 The proposals total over $150 million
7 for the available $25 million that was allocated
8 by the Legislature. That's six to one. And I
9 anticipate that our money would be similarly
10 subscribed.
11 Many of the funding categories for that
12 program will be considered for this one. But
13 three that come to mind right off the top are the
14 AFV infrastructure, biofuels, and we would like to
15 stress, as you probably picked up in the
16 investment plan, from waste resources. That is a
17 little bit of a sidestep from the bit of the dust-
18 up controversy we're having on biofuels now. I
19 believe that if we focus on the waste resources
20 and the proper waste resources, then we can stay
21 out of that morass until the dust settles a bit.
22 The third would be the alternative fuel
23 vehicle incentive monies that were allocated and
24 spent basically for alternative fuel vehicle
25 buydowns. Specifically they were CNG vehicles and

1 battery-electric vehicles.
2 The $1.5 million that was available
3 through the program of AFIP is completely
4 subscribed and they have an additional $3 million
5 in requests for those vehicles, as well. So I
6 think this is an area that will be -- that area's
7 a bit of pent-up market there, and I think that
8 would probably be wise to be on our slate of
9 offerings, as well.
10 As I mentioned, the multiple policy
11 goals. Under the moderate case, and all the cases
12 possible to reduce GHG emissions earlier and the
13 surplus to regulation. Reduce petroleum
14 consumption, increase supply and use of
15 alternative fuels. Achieve bioenergy goals for
16 transportation; reduce criteria emissions with no
17 backsliding; and provide economic development.
18 I think this is a key point of the AB-
19 118 program. California economy can certainly use
20 a shot in the arm, and because we are such a
21 transportation-dominated society, I think that if
22 we can work our way out of this with new business
23 development and new job creation, workforce
24 training in California, I think this is a perfect
25 complement to the situation we find ourselves in.

1 Hopefully this is a way that we can work
2 our way out of the difficulties we're having with
3 transportation fuels and price volatility. But at
4 the same time grow business here in the state,
5 taking advantage of the many aspects we have for
6 technological development in California that have
7 already started. I believe that in this regard
8 California is really where the action is.
9 The overall program. As I mentioned, it
10 will reduce GHG emissions. It'll bring a fuel and
11 vehicle choice and competition to the one-source
12 transportation fuel market without adopting one
13 preferred fuel or vehicle technology. It'll avoid
14 and hopefully lessen the environmental impacts and
15 maintain sustainability of California's natural
16 resources.
17 Leveraging existing government programs
18 and private investment is another key element to
19 this. As we will, in a later slide I'll show you
20 how we will be taking some of the first steps to
21 accomplish that.
22 California will develop fuel supplies
23 from all nonpetroleum, nonconventional sources.
24 Maybe we shouldn't say all. We will develop those
25 that are within the reasonable criteria that we

1 will be employing. Certainly we're not going to
2 violate anti-backsliding, sustainability that's
3 ever present on our mind at this point. But I
4 think there are a pretty wide slate of feedstocks
5 and fuels that we can develop in California that
6 would definitely help us achieve our goals.
7 And one of the ways that I'm suggesting,
8 and I would love to hear other people comment and
9 maybe have a better idea or different idea is to
10 increase the incentives for particular fuels and
11 vehicle technologies that have an enhanced
12 attribute in the fuel and vehicle technology that
13 may be a little bit obscure.
14 What I'm saying is that we would prefer
15 to have certain fuels that we could mold in the
16 future. These fuels that we have today that are
17 nonpetroleum, there are fuels among that group
18 that can offer lower criteria emission, lower GHG
19 emission; can be renewable, or can be from the
20 waste stream.
21 And the way I would look at this is in
22 balancing these different qualities we could allow
23 additional incentive for each one of those
24 attributes. So, in that way, you're not stagnant.
25 And we are developing the fuels in the way that we

1 want to see them in the future. Preferred and
2 improved over time.
3 We haven't done this yet. This is kind
4 of my idea. It does stem a little bit from my old
5 good friend, Carl Moyer, who had the idea to go
6 ahead and buy down NOx. And I think this is -- it
7 could be an effective way to provide enhanced
8 incentives for enhanced attributes as we go
9 forward. Hopefully we can make this fairly simple
10 and straightforward.
11 I'm interested in getting your ideas on
12 that. And perhaps any other funding or incentive
13 mechanisms that come to mind.
14 The eligible projects and activities
15 under the program are the alternative and low
16 carbon fuels development, infrastructure, vehicle
17 technology, commercialization, transit projects,
18 workforce training, public outreach and fleet
19 retrofits. And, of course, the fleet retrofits we
20 have in mind are those that would be obviously
21 CARB certified, and only CARB-certified retrofits
22 would be -- could be funded.
23 Some of the first steps we anticipate
24 for this program, possibly in chronological order,
25 are: leveraging funds and creating partnerships

1 among the different entities out there that can
2 actually embellish and help us in our program.
3 One of those that comes to mind right
4 off the top is they include State Treasurer's
5 Office, the California Alternative Energy Advanced
6 Transportation Finance Authority, which is about
7 as difficult an acronym as the name for this
8 program. But we feel that we can leverage some of
9 the funding that we have through tax-exempt bond
10 financing for loans and loan guarantees going
11 forward for fuel, vehicle and component
12 manufacturing in California.
13 We'd like to seek and establish
14 partnerships with the federal agencies. And I
15 have some preliminary discussions, as I was called
16 out in a group when I was with DOE, and they said,
17 well, you folks really have more money than we do
18 for this now. And so maybe we could bring some
19 other agencies with us to become a partner in our
20 program. So he did mention USEPA, Department of
21 Transportation, and USDA as potential partners for
22 this program, as well.
23 We'd like to develop partnerships with
24 other state and local agencies, Clean Cities
25 Coalitions which are near and dear to my heart, as

1 I was a statewide coordinator for about five
2 years. This is the human capital on the ground as
3 far as alternative fuels and vehicle technology is
4 concerned. And they still exist, kind of on life
5 support. And other alternative fuel and vehicle
6 associations, as well.
7 One of the main things that we see that
8 would generate success with this program is what
9 the public at large is generally thirsting for, I
10 think. And that is the increased consumer choice
11 in vehicles and fuels that they use in those
12 vehicles. We really don't have much choice at
13 this point. We have some choice. Some are out
14 there.
15 The choices are out there; they just
16 have not been fully commercialized or made in a
17 continuous, steady market signal offering. We
18 would like to see that change. And we would
19 probably be engaging with discussions with the
20 automakers, as well, to try and do that.
21 In readying the market for this we would
22 like to increase our public education and outreach
23 on fuel and vehicle choice to consumers kind of
24 like the FlexYourPower, but we could maybe say
25 FlexYourFuelPower campaign that's on the

1 television and on radio.
2 Continue to expand the AFV purchase
3 incentives. Given that noted success from the
4 ARB's and are jointly planned, AFI program.
5 Establish alternative fuel stations,
6 retail and fleet, near groupings of vehicles
7 wherever possible. I think this really works well
8 to strategically match those stations where the
9 vehicles are. Not just in a willy-nilly fashion.
10 That is a difficult task. I've got
11 experience in that area and it is not as
12 straightforward as you might imagine. We do have
13 some tools here at the Energy Commission that can
14 help us with that, insofar as we have a contract
15 that has broken the code to find out where these
16 alternative fuel vehicles are located by zip code.
17 So we will be using that tool, as well.
18 We would like to, as I mentioned
19 earlier, encourage the auto manufacturers to
20 certify alternative fuel vehicles in several
21 models, fuels and technologies for California.
22 And we would be demonstrating pre-commercial and
23 commercial fuel and vehicle technologies with auto
24 journals, consumer groups and high-profile
25 individuals and organizations.

1 I think we'd probably be remiss if we
2 didn't use the number one salesman for California
3 in that regard, as well. The Governor may be very
4 helpful in this regard. I understand he's got a
5 high profile.
6 This program, as I mentioned earlier, is
7 one that we think has outstanding potential for
8 economic development in the state in an area that
9 we definitely need and need now. Instate fuel
10 production is one. And we're featuring from waste
11 stream feedstocks to kind of avoid the
12 controversy. Not all waste stocks are going to be
13 acceptable. We understand that, but we would like
14 to go forward with some of those that are, that
15 are clear winners for many different reasons.
16 We'd like to attract new businesses and expanding
17 existing companies for alternative fuels
18 production, vehicle production, fuel storage
19 component, manufacturing. And we think we can
20 foster a -- foster clean enterprise -- clean
21 energy enterprise zones in the state.
22 And workforce development for green
23 collar professionals. I think there are some
24 areas that would just love to have a clean energy
25 enterprise zone because they are economically

1 depressed at this time.
2 Initial funding opportunities. Some
3 that are clear to us are to refurbish and expand
4 the existing state and privately funded access
5 that we have. And we have a significant
6 infrastructure for alternative fuels. We have
7 large fleets that are operating alternative fuels
8 and vehicle technologies now.
9 And I think it's wise for us to support
10 those, refurbish them, and you know, shine them up
11 for the future, if you will. Because they are an
12 existing asset; they were put in years ago with
13 state funds. And I think they have a long life
14 ahead of them as long as we take good care of
15 them.
16 State, local and private fleet AFV
17 purchase incentives for light-, medium- and heavy-
18 duty vehicles. We could assist establishment of
19 alternative fuel stations for the AFV groupings I
20 mentioned earlier and other strategic locations.
21 And establish a medium-duty and heavy-duty centers
22 of excellence for precommercial and commercial
23 deployment.
24 There are several in the state in
25 academic institutions, and nonprofit, and other

1 organizations that I think we could take good
2 advantage of, if we supported them. That would be
3 the feeder to the commercialized technologies and
4 fuels that we're looking for.
5 Program implementation. Basically this
6 investment plan is one of the first starting
7 points for that. We will hope we'd be forming
8 some of the decisions from our discussions and
9 from your advice.
10 I'm looking forward to the discussion,
11 as I think a lot of you are. Continued public
12 process will go on for the planning and developing
13 of these funding mechanisms.
14 Right off the bat we're going to be
15 engaging with the different industry groups, the
16 fuel, the vehicle technologies and industry
17 groups, environmental groups, as well. We seek,
18 actively seek that input for our development of
19 the incentives and the solicitations looking
20 forward to the future.
21 This is just to really start the ball
22 rolling. And we would develop a strong
23 information based on fuels and vehicle
24 technologies, including environmental impacts,
25 sustainable production and use, market potential

1 and economic impacts, positive impacts, for the
2 state.
3 As I mentioned, this is just to start
4 the ball rolling. We will be gathering a great
5 deal of information, market and consumer
6 information, technology readiness information,
7 fuels and vehicle incentive needs, and the team,
8 and we are all on that team, will be an immense
9 help to us, starting now.
10 Yes, now we can start the ball rolling,
11 and I encourage discussion on this draft plan.
12 Thank you.
13 VICE CHAIRPERSON BOYD: Thank you,
14 Peter. Under the next item on the agenda,
15 Advisory Committee discussion, I'd like to break
16 it into parts. First, I'd like to ask the
17 Advisory Committee Members if they have any
18 questions of Peter reflecting on his presentation.
19 And then secondly, be able -- then we'll just
20 engage in the discussion on the draft plan in
21 detail.
22 Yes, Patty.
23 MS. MONAHAN: I had a question about how
24 the regulations and the Advisory Committee
25 investment plan fit together.

1 MR. WARD: The regulations, it seems to
2 me, are one part of gathering the public benefits.
3 And I think a market approach could be a very good
4 complement to that, as well. Because I think
5 regulations -- it was decided in the AB-1007
6 process that regulations alone would not achieve
7 the GHG or criteria emission goals, or our
8 petroleum goals.
9 Not much regulation as far as petroleum
10 reduction or alternative fuels goals are
11 concerned. I think that they do complement each
12 other very well; they go hand-in-glove. I think
13 the market mechanisms can pick up where the
14 regulations take off. Some of these fuels may or
15 may not be in the low carbon fuel standard.
16 MS. MONAHAN: So, just for clarity,
17 though, it's not as though the investment plan has
18 to be finalized in order for the regulations to
19 move forward?
20 (Parties speaking simultaneously.)
21 MR. WARD: -- think so.
22 MS. MONAHAN: Do the regulations refer
23 to the investment plan in some direct way.
24 MR. WARD: I don't know. Someone more
25 closely watching the regulations might know that.

1 VICE CHAIRPERSON BOYD: Mr. Smith, do
2 you want to rise to the podium and talk about what
3 we've done to date, and yesterday's workshop?
4 MR. SMITH: Can I ask a question of
5 Patty first. By regulations, are you referring to
6 the regulations of our program, or the regulations
7 being developed in ARB?
8 MS. MONAHAN: The regulations for
9 disbursement of the funding within --
10 MR. SMITH: Okay, --
11 MS. MONAHAN: -- CEC --
12 MR. SMITH: -- for the program, okay.
13 MS. MONAHAN: Right.
14 MR. SMITH: I'm sorry, I wasn't sure.
15 The regulations are sort of the foundation of the
16 program. We have to have those in place before we
17 can do anything in terms of actually awarding
18 dollars, writing checks to recipients.
19 Yesterday we talked about various
20 aspects of those regulations. Bottomline is,
21 given everything we have to do, we anticipate
22 having regulations adopted and approved by the
23 Office of Administrative Law, published by the
24 Secretary of State in spring of '09. We're
25 thinking maybe March of 2009.

1 The regs, though, in terms of the
2 investment plan, it's the investment plan is
3 referred to in regulations. Let me back up. The
4 impetus for doing regulations is to clarify and
5 further define provisions of statute that are
6 currently vague. And that will bring certainty
7 and clarity to the administration of the program.
8 So, that's the underlying reason to do
9 regulations.
10 In the statute there's the investment
11 plan. It tells us we have to develop an
12 investment plan. And it specifies that the
13 investment plan must contain priorities, and
14 identify priorities in funding opportunities.
15 Then what we feel is needed to further
16 that is in regulations we need to be clear that
17 we're not only developing this investment plan,
18 but we are -- the Energy Commission will actually
19 adopt it. It will become a formal document that
20 the Energy Commission considers and adopts.
21 Secondly, the regulations will specify
22 that this document, the investment plan, once
23 adopted, basically becomes the guide for our
24 decisions, as to how we allocate and spend the 118
25 dollars.

1 So, whatever decisions the Energy
2 Commission ultimately makes must somehow be
3 reflected in the priorities that the investment
4 plan identifies.
5 Does that help? Does that answer your
6 questions?
7 MS. MONAHAN: Can I just ask a process
8 timing question around the finalization of the
9 investment plan?
10 MR. SMITH: Sure.
11 MS. MONAHAN: We have one more committee
12 meeting scheduled. What is CEC's timeline for
13 finalizing the investment plan, and what do you
14 see as a way to get additional feedback and input
15 from this committee into that process?
16 MR. SMITH: We planned, when we started
17 this process, at the outset we planned for three
18 meetings. That's not cast in concrete, but that
19 was the sequencing that we felt was appropriate at
20 the time, at the outset of this process.
21 Given that we would have the investment
22 plan before the Commission and adopted in the late
23 October timeframe -- there's a business meeting
24 October 28th or 27th, something like that. So we
25 anticipate that it would be on a regularly

1 scheduled business meeting late in October, that
2 last business meeting in October.
3 Since then we've given additional
4 thought as to how this process might unfold. And
5 there is a time period between the last scheduled
6 Advisory Committee meeting, which I believe is
7 September 2nd is, I think, what we've tentatively
8 identified.
9 So there's about a two-month span there
10 between that and when we adopt it at a business
11 meeting.
12 One consideration we had been discussing
13 with the Commissioners, Commissioners Boyd and
14 Douglas, is perhaps taking the draft investment
15 plan that we've evolved, developed, with help from
16 this committee, and have workshops throughout the
17 state. So perhaps a couple of workshops that
18 might be located in the Bay Area and the Valley
19 and the L.A. area, to present the plan to the
20 public and to stakeholders in those areas.
21 And provide additional opportunity for
22 feedback from the public that we might not
23 otherwise have while we're undergoing this
24 process, working with the Advisory Committee to
25 sort of develop the base plan.

1 Another aspect that we want to try and
2 pursue -- and it's a result of the workshop we had
3 yesterday -- a big issue in the regulations and a
4 major focus of what we will do throughout this
5 program is addressing the issue of sustainability,
6 and what does it mean, what are our sustainability
7 goals, as the statute directs us to develop and
8 identify.
9 We've done a lot of work in that area,
10 trying to identify appropriate goals for a
11 program, and how they might be reflected in
12 regulations. And then in a more detailed manner,
13 how they might be actually implemented is part of
14 our program. How we would make decisions about
15 projects based on sustainability goals.
16 It's a very complex question. And I
17 think one of the things we learned from yesterday,
18 and something we've been talking about since
19 yesterday, is perhaps giving that question a
20 little bit more public airing before we develop
21 our draft regulations, themselves.
22 And so we may -- we are giving some
23 thought to having an additional workshop or two on
24 the question of sustainability. We just feel it's
25 necessary. We feel the discussion we had

1 yesterday, although helpful, in presenting to the
2 public what we've developed in terms of goals,
3 isn't quite adequate for purposes of now moving
4 forward and actually developing draft regulations.
5 We're just not quite comfortable enough
6 yet that we've had enough public airing. So we're
7 giving some thought to having an additional
8 workshop or two just on that subject within the
9 next -- over the course of the next month.
10 So, am I answering your question or am I
11 wandering too far afield?
12 Okay, thank you.
13 MS. ODABASHIAN: I had a couple of
14 questions. Is there any threat that any of these
15 state programs developed during this process could
16 be argued as preempted by federal law? Could it
17 be the industry argue that they're preempted?
18 VICE CHAIRPERSON BOYD: Welcome to
19 California.
20 (Laughter.)
21 VICE CHAIRPERSON BOYD: I don't have
22 anything in particular in mind. There's certainly
23 precedent for that allegation. I'm sure that
24 threat hangs over California all the time. We're
25 kind of used to it. I have nothing --

1 MS. ODABASHIAN: Is that entering into
2 the thought process as you develop these programs?
3 MR. SMITH: Well, one of them --
4 MS. ODABASHIAN: Making them less, you
5 know, susceptible to --
6 VICE CHAIRPERSON BOYD: Mike might give
7 you a more politic answer than I would.
8 MS. ODABASHIAN: Okay.
9 VICE CHAIRPERSON BOYD: Which would be,
10 hell, no.
11 (Laughter.)
12 MS. ODABASHIAN: Okay, good.
13 MR. SMITH: I can take a very quick stab
14 at that, and that I see that Commissioner Douglas
15 is reaching forward for her mike, so --
16 VICE CHAIRPERSON BOYD: She's the new
17 one, she wants to modify me, perhaps.
18 MR. SMITH: One aspect in answering that
19 question is there is a provision statute that
20 prohibits us from providing funding for projects
21 that are otherwise required by at federal, state
22 or local laws, rules or regulations. And that was
23 an area that we raised yesterday in our
24 presentation, because it certainly is subject to
25 conditional clarification of regulations.

1 So, from that standpoint there is a
2 preemption, if you will, there where it is not
3 used in the conventional sense, but there's more
4 of a prohibition about how we use our funds for
5 projects or activities that federal law already
6 requires an entity to comply with, or engage in.
7 So that may be one aspect of your answer.
8 Commissioner Douglas, I'll turn it over
9 to you.
10 COMMISSIONER DOUGLAS: All I was going
11 to say is that I think the question is broader
12 than are we concerned about preemption. I think
13 we're going to have to pay very close attention to
14 federal law and policy in order to not be
15 duplicative, and in order to have the best
16 possible synergy where possible with what's going
17 on in the Capitol, in Washington.
18 So, I think clearly through the life of
19 this program we're going to have to pay close
20 attention to federal programs.
21 MS. ODABASHIAN: My other question was I
22 think it's great that you're focusing on giving
23 consumers more choice. Certainly they want that.
24 Is cost to consumers for these alternative fuels
25 and alternative fuel vehicles a criteria at all

1 that is going to be considered in looking at
2 various programs that we're going to fund? Is the
3 cost to consumers part of it at all?
4 MR. SMITH: Well, I think costs would be
5 a consideration in terms of how we provide
6 funding, specifically if there are incentives to
7 consumers. A number of these vehicles that are
8 available are going to have a premium over their
9 conventional counterpart, or a comparable
10 counterpart. There certainly isn't an exact
11 counterpart, say for a Prius. But there's a
12 comparable vehicle. Prius is a bad example,
13 because it's probably not a vehicle that we would
14 probably provide funding support for, given the
15 demand for the vehicle.
16 But other vehicles, for example, plug-in
17 hybrids, when they do come up to the market in a
18 commercial manner will, no doubt, have a premium
19 attached to them. And while the fuel, if you
20 will, the electricity that one would charge the
21 batteries, on a gasoline-gallon equivalent, is
22 going to be much cheaper than gasoline, the
23 vehicle will be more expensive.
24 And so the question becomes how do we
25 effectively use our 118 dollars to provide

1 incentives to consumers to purchase these vehicles
2 as quickly as possible. We want to get these
3 vehicles on the road as quickly as possible. And
4 if their higher initial cost proves to be a
5 barrier, then the benefits don't accrue.
6 So trying to find a balance between
7 providing the right incentive level to get
8 consumers into the showroom floors and buy these
9 vehicles, allow them to start accruing the
10 benefits then, making them indifferent almost to
11 the purchase of the vehicle, the cost.
12 And then allowing them to accrue the
13 operational cost benefit from the cheaper source
14 of fuel. And certainly the cleaner source of fuel
15 from a greenhouse gas standpoint.
16 So we're trying to find that balance.
17 And we will certainly seek, in part, your input on
18 how we, you know, what that balance is. That's a
19 tough question.
20 VICE CHAIRPERSON BOYD: I think a simple
21 answer is to look to California precedent for
22 those state agencies sitting around the table
23 here. I think most specifically of the Air Board
24 and ourselves, the long history is cost.
25 Therefore, cost to the consuming public is always

1 a very high criteria issue, or issue of interest.
2 I'm not sure we established criteria, per se, but
3 we're very cognizant historically of cost, and
4 what cost means to the ability to succeed with any
5 kind of a proposal.
6 So, I think, by all means, cost will be
7 there. And dropping the flip side of my earlier
8 remarks about the federal government, the
9 precedent is in this state, of course, always to
10 be cognizant of the federal government and
11 allegations of being usurped by their authority.
12 I think agencies historically have
13 crafted their programs to avoid those kinds of
14 issues as much as is possible.
15 So, I think precedence on the side of --
16 in California is on the side of a positive view on
17 both of those features in designing programs for
18 regulations.
19 MS. ODABASHIAN: Thank you.
20 MR. WARD: I'd also like to mention that
21 in the incentive analysis that we'll do, we would
22 like to perhaps lean on you and your organization
23 to help us provide what the conventional
24 alternative would be to some of the vehicles that
25 we have.

1 Because we want to make sure that we
2 craft incentives that are both necessary, and I
3 think we all agree they are necessary, but will
4 they be sufficient to have the grab in the market
5 they will be able to achieve, as well.
6 Don't want to undercut that, because it
7 would be pure folly to do that. We want to knock
8 that barrier down if we can.
9 VICE CHAIRPERSON BOYD: Jan.
10 MS. SHARPLESS: Yes, Peter, I was jus
11 curious. There were tables included with your
12 draft investment plan that you didn't include in
13 your briefing. Is there a reason -- are you going
14 to discuss that later, or is this just
15 illustrative? Table 3 that, you know, is titled
16 recommended funding areas for the first and second
17 years.
18 MR. WARD: We can certainly discuss it.
19 I didn't include it in the presentation today.
20 Basically illustrative, saying here's some of the
21 examples that we see. You'll note that there are
22 some categories that there was nothing in, so it's
23 kind of under construction, under development.
24 And we are leaning on you folks to give us that
25 good advice, as well.

1 MS. SHARPLESS: Sure, --
2 MR. HWANG: Can I follow up on that
3 question, Jan. I appreciate that question. And,
4 Peter, I really appreciate the thought that went
5 into the report. And I think it's a great kind of
6 phase-building exercise for what I was envisioning
7 to be -- what I think of as investment plan.
8 So I guess what I'm struggling with is
9 in terms of this document. The table -- is it
10 table 3 or table 2, I forget now, but --
11 MS. SHARPLESS: -- two tables --
12 MR. HWANG: Two tables.
13 MS. SHARPLESS: It just says table 3.
14 MR. HWANG: Okay, table 3, as far as I
15 can tell, constitutes what the staff -- Peter,
16 please clarify this if I miss something -- what
17 the staff is proposing as an investment plan.
18 And your clarification that was just
19 illustrious would suggest maybe that this draft
20 investment plan really doesn't have a proposed
21 investment plan.
22 So, do you want to clarify, one, is this
23 the investment plan you're proposing, this table
24 3? And if it is, I guess I'm struggling with my
25 vision, I think maybe some of the statutes already

1 guidance in terms of what the investment plan
2 might be doing in terms of setting some sort of
3 prioritization for a particular technology and
4 fuels in a way which would help guide and be able
5 to insure that the actual implementation of the
6 funding program is consistent with longer term
7 state goals has articulated through how the
8 investment plan would see priorities being set.
9 In particular, I particularly
10 appreciate, Peter, your putting the program goal
11 up front. In the second slide you outlined the
12 program goal, which we concur with a hundred
13 percent, that the program goal is to help attain
14 the primary over -- I believe you may have said it
15 as overarching goal, Peter. We would agree. Is
16 to attain the state's climate change policies.
17 And if that's the case, and I think that
18 we should be able to articulate either from a 2050
19 vision or a 2020 vision of what kinds of fuels and
20 technologies are needed to meet the climate change
21 policy goals that from there helps that priorities
22 for funding for different technologies to insure
23 this program is contributing the most it can
24 towards achieving the climate goals.
25 Illustration of -- for such a plan, I

1 think, is in table 1, your draft investment plan,
2 where the 1007 case goals shows that while there
3 are, I think you said nearly all the fuels
4 contribute to greenhouse gas reductions, there's
5 clearly some fuels that do not.
6 And I think there's an immediate screen
7 or criteria which would then apply for this kind
8 of funding which would lead you to conclusion that
9 certain fuels that do not contribute to greenhouse
10 gas reductions, or contribute only minor, have the
11 potential to contribute only minor amounts, would
12 not be prioritized.
13 So that's what I was kind of envisioning
14 this investment plan might lead us to in terms of
15 some conclusions and guidance to insure there's
16 consistency between our investment plan -- our
17 state goals, investment plan and the program
18 regulations, the ultimate actual disbursement of
19 funds.
20 So, am I missing something here? Or is
21 the Commission Staff looking at the investment
22 plan in a different way than I just described?
23 MR. WARD: No, I don't think so. These
24 are suggestions that we wanted to start with, and
25 we certainly didn't this this was the do-all and

1 end-all.
2 When I mentioned the structure of the
3 specific incentives I think I tried to address
4 that. I think there might be an effective, if you
5 will, screening out for those fuels that do not
6 accumulate the additional attributes, and
7 therefore could not accumulate the additional
8 incentives.
9 That's one way that I see for us to stay
10 true to the AB-1007 plan, which said we only
11 achieve our goals by using, or at least making the
12 transportation fuel market available to all the
13 fuels.
14 That being said, that being an adopted
15 joint agency goal, I tried to see if we could
16 balance that by how we operate incentives by
17 adding these additional attributes or those
18 attributes that we favor.
19 MR. HWANG: That's helpful -- I do
20 believe that the criteria should be able -- we
21 should be able to use the criteria for the
22 potential projects in a way which would lead us to
23 some level of consistency.
24 However, I think it's not -- it's more
25 than just a scoring system I would suggest that we

1 could use to help insure this investment plan
2 articulates the vision for what kind of fuels we
3 should be prioritizing. But you think that there
4 are some very clear, through the 1007 process,
5 both to this 2020 table that you put into your
6 draft staff plan, also to the 2050 visioning
7 exercise, we have a clearer idea.
8 And I think it's very important that the
9 State of California can articulate that repeatedly
10 and draw consistency -- in order to send a signal
11 to investors and developers of these new fuels and
12 technologies, that these are the kinds of fuels
13 and this is the kind of outcome and the kind of
14 resource the State of California envisions putting
15 into the marketplace as incentives in order to
16 achieve our goals.
17 I mean to get clearly you have XTL, for
18 example, in this table 1, not contributing to
19 greenhouse gas reduction goals. So I think it
20 would be very important to clarify that fuel such
21 as XTL and others that do not contribute will not
22 be eligible for funding.
23 And technologies that can potentially
24 contribute a lot will be, you know, the investment
25 plan will be looking for investing significant

1 amounts of funds into those kinds of technologies
2 which can contribute substantially.
3 MR. WARD: Well, I think you've got a
4 point well taken. What I probably did in
5 describing the enhanced attributes for enhanced
6 incentives in my discussion was probably more
7 shorthand. Because I wanted to try to see a way
8 through the different goals to try and actually
9 put money and financial incentive, enhanced
10 incentives for those projects that provide those
11 attributes.
12 But what I think in our solicitations
13 we've can more fully describe the rationale behind
14 that. And that would, I think, accomplish what
15 you're seeking there. To show that, you know,
16 these are the multi-policy goals. And we would
17 favor the fuels that address those goals directly.
18 And they would be either treated in a
19 weighted criteria fashion in evaluation better.
20 Or, and I think it's or, not and, add additional
21 incentives to those fuels and vehicles that
22 accumulate those different attributes.
23 But I think the preamble discussion for
24 that is probably should be more fully attended in
25 the future draft.

1 COMMISSIONER DOUGLAS: We've got a
2 number of hands up. I think I just saw Tom --
3 John, Tim, Patty, Tony --
4 VICE CHAIRPERSON BOYD: Mike Walsh.
5 COMMISSIONER DOUGLAS: -- Mike Walsh and
6 Tom Cackette --
7 VICE CHAIRPERSON BOYD: Tom Cackette.
8 COMMISSIONER DOUGLAS: -- and Jay --
9 (Parties speaking simultaneously.)
10 VICE CHAIRPERSON BOYD: Bonnie and Jay
11 and -- why don't we just go around the table.
12 Start with --
13 COMMISSIONER DOUGLAS: Let's go around
14 the table.
15 VICE CHAIRPERSON BOYD: We'll start with
16 John.
17 MR. SHEARS: Okay, thanks.
18 VICE CHAIRPERSON BOYD: Remember, I did
19 say let's comment lightly on Peter's presentation,
20 and let's get into the meat of the draft plan. I
21 think we're at the point B in my suggestion. So,
22 let's get into the meat.
23 MR. SHEARS: Yes, first I want to thank
24 Peter for pulling together the draft plan, and
25 appreciate him giving an overview of all the

1 available tools that are already in place to help
2 assist us with the investment plan.
3 I want to just echo Patty's concerns.
4 I'm having a hard time sort of having a sense of
5 how the regulatory process is going to integrate
6 with the investment plan.
7 Sort of harkens back to some of my
8 concerns from the first Advisory Committee
9 meeting. And given that we have --
10 COMMISSIONER DOUGLAS: John, can I ask
11 you a question about that before you go on. So
12 Mike's answer was that we would work with the
13 Advisory Committee to sort of finalize a draft
14 investment plan that we then take around the state
15 in public workshops, say at least three, possibly
16 more, to get additional public input.
17 That was, you know, our -- is that -- do
18 you have concerns with that? Is that more along
19 the lines of what you were looking for?
20 MR. SHEARS: I think that should be
21 happening anyway. I think, you know, part of the
22 intent of AB-118 in setting up the Advisory
23 Committee was, you know, that, well, I think it's
24 natural that, you know, we should be having
25 conversations as committee members with staff to

1 help inform staff's thinking. You know, just sort
2 of outside of the public realm.
3 I think we need to make sure that we
4 have enough meetings; not that any of us in the
5 room need more meetings, but in order to insure
6 transparency that we, you know, have a reasonable
7 number of these Advisory Committee meetings.
8 I don't think that one more Advisory
9 Committee is going to be sufficient. I think we
10 may want to think about having at least one more.
11 So, I think, yes, there should be, you
12 know, a process with staff and the Advisory
13 Committee. I think it's very good to have a
14 supplementary set of public workshops that aren't
15 necessarily Advisory Committee workshops.
16 But, you know, I would want us to be
17 able to be sure that, you know, there's enough
18 input received at the next scheduled Advisory
19 Committee. And then at least one more that, you
20 know, if the process works out and from a
21 stakeholder input and comments that we're
22 receiving, it's clear that we've got a fairly good
23 plan together. Then, you know, the committee can
24 decide to recommend the plan to the Commission.
25 But I just want to be sure process-wise

1 that, you know, we maintain the public
2 transparency as much as possible in this.
3 So, I'd like to be able to have more of
4 a discussion. Right now, you know, we've had a
5 couple of workshops for regulations have been
6 discussed. I think we need to have more of those.
7 And I'd like to see more of an
8 integrated discussion -- more opportunities to
9 have an integrated open public discussion of how
10 the regs will integrate with the investment plan.
11 It's kind of hard to see right now, given that we
12 have this initial draft of the investment plan,
13 how those two will really be linking up.
14 So, just -- that's just my preliminary
15 observation. I just want to offer some other
16 advice in terms of our thinking on this. And I,
17 you know, had this discussion with some of the
18 staff, also, similar discussions with folks over
19 at the ARB.
20 In my thinking, AB-118, in conjunction
21 with the low carbon fuel standard, is a great
22 opportunity to develop a model system for other
23 jurisdictions that are looking at developing,
24 approaches to developing their own low carbon fuel
25 standard programs.

1 There are a lot of U.S. states, many
2 provinces are coming on board, especially through
3 the WCI. And some of the monies, I think, we
4 should be thinking about using to help defray the
5 costs, especially where we're using agronomic and
6 forestry feedstocks to help develop a system so we
7 can do some dry-running, as it were, for
8 reporting, certification, verification processes.
9 My thinking is one to help sort of do
10 some test running of the programs. Allow the
11 agencies to develop and ability to sort of maybe
12 help streamline or make regulations that work more
13 effectively as we move towards 2020.
14 But also I'm hoping that if we design
15 the reporting systems properly we may be able to
16 start collecting some good verifiable data that we
17 can also incorporate into our LCA models as we
18 move forward.
19 So, this program hopefully could
20 provide, you know, sort of a supplementary benefit
21 in those regards.
22 And then also I just want to also talk
23 about the issue around some of the sustainability
24 aspects. In terms of whether we should be
25 pushing, you know, this program to help reduce the

1 footprint, you know, on what conceptually we
2 consider to be a baseline environmental footprint
3 for different fuel pathways, especially again on
4 the biofuels side.
5 I think if we think about the program
6 going forward, and again this is seven years that
7 we have to work this program and learn by doing,
8 I'd like to see if we can help design the systems
9 through the program, or assist in designing these
10 systems and approaches to these systems through
11 the program to help reduce the environmental
12 footprint of these different fuel pathway
13 approaches.
14 So, you know, again, I think we should
15 think about that. I know it's challenging. There
16 may be a co-benefit in that if we can, in fact,
17 work this process to be able to help sort of make
18 these programs more -- perform better
19 environmentally, that when we look at agricultural
20 systems in and of themselves right now, there's a
21 good case being made that they're not sustainable,
22 given a lot of their environmental impacts.
23 And I would hope that we would, from
24 what we could learn from developing for some of
25 these fuel programs, that we'd be able to benefit

1 agricultural and forestry practices going forward.
2 Because I suspect that as we move forward, even
3 though, you know, industry proponents point out
4 how tightly regulated they are, I suspect that
5 they may become more tightly regulated in the
6 future.
7 And so if this kind of system, if we can
8 derive a co-benefit that could allow for practices
9 to be ported over to the broader industries, I
10 think that would also be a useful outcome that we
11 should be thinking about.
12 So, beyond sort of just sort of the main
13 technology incentive type programs, I just want to
14 propose that we think about some of these other
15 challenges because one of the issues that is, you
16 know, constantly raised by some of the fuel
17 producers or people looking to enter the field,
18 is, you know, the financial and staffing burdens
19 that are placed on -- going to be placed on them
20 by having to, you know, collect data, report data,
21 et cetera.
22 So I just wanted to offer those
23 observations as we're thinking about this.
24 VICE CHAIRPERSON BOYD: Thanks. Tim.
25 And let's be cognizant of the time lest we be here

1 all day.

2 MR. CARMICHAEL: Thank you, Commissioner

3 Boyd. I have a few comments; I'll keep them

4 brief.

5 I was expecting a lot more detail in the

6 draft. And I am concerned, as others have already

7 expressed, about getting from here to there, even

8 with two more committee meetings. I'm not clear

9 yet on what Energy Commission Staff envisions to

10 go from this draft to, you know, a true investment

11 plan.

12 Take, for example, table 3. And I think

13 the categories all look reasonable. I think the

14 suggestions all look reasonable. But there's no

15 communication about allocation or priority in this

16 table. Are they all equally valued? Are we going

17 to give $5 million to every one of these ideas?

18 And, you know, I have the benefit of

19 having seen an alternative approach suggested by

20 consulting company, TIAX. I think some of the

21 other committee members have seen that, you know,

22 that lays out a portfolio approach that I believe

23 the Energy Commission and the state would be wise

24 to use the approach. Not necessarily all the

25 specific elements.

1 And I'm wondering, you know, at some
2 point if we might have the benefit of a
3 presentation from TIAX just to give us a flavor of
4 that. Because I just think, you know, it's on a
5 different scale of detail that is where, I think,
6 we need to go as a state with an investment plan.
7 They also go to the next level which
8 this draft doesn't, in really getting into
9 evaluation criteria and process. Which, I think,
10 all of us are, you know, are interested in. We
11 don't need to know, and I don't think our task is
12 to identify which projects are going to be funded
13 and which aren't. But the framework for that
14 decisionmaking is what I think our charge is.
15 And the last thought in this thread is
16 that obviously to do that you come up with a
17 framework, and you need to compare that to what's
18 going on around the state and around the world.
19 And Commissioner Douglas and others have already
20 mentioned this, but I think that's a critical
21 element that will need to be done.
22 You know, some refer to it as the gap
23 analysis, you know, the different between what we
24 think we need and what others are already doing,
25 and what's left over.

1 So, that's my opener on this. I think
2 there's a lot of work to be done here to make it,
3 you know, a really viable investment plan for the
4 state.
5 VICE CHAIRPERSON BOYD: Thanks, Tim. I
6 don't want to speak for the staff, but I'm sure
7 they walked a tightrope between prescribing too
8 many ideas and waiting to hear the ideas of their
9 Advisory Committee in terms of specific dollar
10 allocations or criteria or what-have-you.
11 So, I would presume after they've heard
12 everything they hear today they'll be able to take
13 a giant leap to another iteration.
14 And I would point out that I think TIAX
15 is in the audience. I think they're probably
16 going to say something during the public period.
17 And I think many of us, by now, in this room have
18 briefed or introduced to their approach. I know
19 the staff has for sure.
20 In any event, thanks.
21 COMMISSIONER DOUGLAS: And I'll just add
22 that I think it's very clear that we need more and
23 more clarity in terms of prioritization and how we
24 decide among the many good things on the list,
25 what gets priority and how much we put into, you

1 know, invest in one option versus another option.
2 And this, again, is one of the major
3 areas where we want Advisory Committee guidance
4 and input. And need that to move forward.
5 MR. CARMICHAEL: On that specific point,
6 a quick follow-on. I forgot to mention that a
7 number of us were surprised that the CEC's PIER
8 program that looked at priorities, and quite a bit
9 of work went into it, is not referenced in these
10 documents.
11 It seems like that would be a valuable
12 resource for the CEC to use, you know, just along
13 with the other state policy initiatives that are
14 identified and referenced, to help further this
15 process along.
16 MR. FRANTZ: On the corn ethanol you
17 have on the table that it's going to stay about
18 the same till 2022. Yet you admit there's a lot
19 of controversy and that the dust should settle
20 soon. And if it's going to -- I think you're
21 sending here a clear signal that you want corn
22 ethanol to stay as part of the fuel mix, 25
23 percent still of the alternative fuels till 2022.
24 And still it's a part of the greenhouse
25 gas avoided, 12 percent here in 2022. Yet it may

1 be a strong negative instead to wipe out all of
2 these gains if you keep it in there, even at that
3 level.
4 So, instead I think you're sending a
5 clear signal that it very well could stay in there
6 at this level, current levels or slightly above.
7 And that's sending a clear signal to the ethanol
8 industry to go ahead and invest a billion dollars
9 in the next couple years here in California to
10 build ethanol plants from corn. None of which
11 will be grown in California.
12 So, I'm wondering what you're trying to
13 say here with this leaving corn ethanol in here at
14 such high levels.
15 MR. WARD: I think basically what you're
16 seeing in that table are how we evaluated the
17 different fuels for the investment that would be
18 required. We ran many many more runs than are
19 represented on that table.
20 Corn ethanol is with us today. That is
21 one that we evaluated. The profile of that is
22 rapidly changing, just as our world is changing
23 around us. And I'm not sure that that would be
24 the same GHG reduction that we had in the 1007
25 report that you see now, and that we're getting

1 more and more information about.
2 It will be an informed process. I don't
3 think we're going to be featuring corn ethanol
4 projects in California with our funding. And we
5 have to, I think, be careful to understand what
6 we're speaking of here is the effect we would have
7 with this funding.
8 We cannot necessarily affect what is
9 going on outside this room and outside this
10 program. There may well be, and as a matter of
11 fact I'm sure that there's a lot of venture
12 capital money going into corn ethanol that may
13 appear now to be rather ill-considered,
14 considering what we do know now.
15 These are just, they're basically what
16 we used in the 1007 process. This was a fuel
17 cycle analysis that was done over a year ago. And
18 we'll be updating all those inputs as well, so
19 this is kind of a moving picture at this point.
20 MR. FRANTZ: Well, we need it updated
21 right now as far as corn ethanol is concerned.
22 Investors are still coming in.
23 MR. WARD: I don't know how I can more
24 clearly state it. For this program I doubt,
25 personally, that we will see corn-to-ethanol

1 projects funded.

2 MR. EMMETT: Just a couple of comments

3 and observations. First of all, I really

4 appreciate seeing this presentation. Like Roland

5 said, with the climate change goal stated right

6 upfront as the key factor we all need to be

7 looking at for implementation or spending of this

8 money.

9 I do think that the AFIP and the

10 alternative fuels plan give great context for

11 thinking about these things. I don't think that -

12 - I'm sort of repeating what was said already, but

13 that doesn't, of itself, give us a plan. And I

14 appreciate Commissioner Douglas' comments about

15 what we really need now is guidance about how to

16 think about prioritizing how we spend this money.

17 And I would echo what Tim Carmichael

18 said about the TIAX approach, which I had the

19 ability to take a look at. And it does. What it

20 does do that this draft doesn't yet do is provide

21 a methodology or framework for thinking about how

22 to prioritize and how to make decisions about the

23 projects that will be funded.

24 And I will throw out for just moving

25 beyond this point, that for me it's important to

1 think about the 2050 context, and which
2 technologies have the most promise or the highest
3 opportunity for achieving meeting those 2050
4 climate change goals. And then working backwards
5 from there.
6 And hopefully TIAX will present their
7 framework, and like Tim said, it's not the only
8 way, but it's at least a good starting point for
9 thinking about an approach or a methodology for
10 making decisions.
11 And then I wanted to sort of step
12 backwards and speak to something specific. In
13 addition to the PIER program being sort of left
14 off that list of state policy initiatives, I think
15 another omission is the executive order S-704, the
16 hydrogen blueprint plan.
17 And there's a tremendous amount of
18 experience and work that's been going on and will
19 continue to go on in terms of deployment of
20 alternative fuel and the attendant advanced
21 technology vehicles. And there's a lot of
22 thinking that was done on the part of many many
23 stakeholders on environmental performance
24 standards that they can consider CO2, criteria
25 pollutants, toxics, minimum renewables

1 requirements.
2 And, you know, there are already quite a
3 few stations and vehicles and experience with Fuel
4 Cell Partnership, et cetera.
5 So the S-704 hydrogen blueprint plan, I
6 think, is another state policy initiative that
7 should be on that list.
8 MR. WARD: Thanks for your comment. I
9 want to point out that I think the TIAX work is
10 helpful and it does lay it out in the context that
11 we can well see at the end of this investment plan
12 process.
13 However, I think it might have been
14 premature for us to put it in that format before
15 we came to you, the Advisory Committee, itself.
16 And I do think we can see a format that
17 is very similar to that one.
18 MR. COLEMAN: So, I don't want to pile
19 onto this, but thank you, Peter, for putting this
20 together. I think it's a great encapsulation of
21 the priorities and areas of opportunity.
22 I did agree with the comments of Roland
23 and Tim, et cetera, about this need for this
24 methodology. I haven't seen the TIAX methodology
25 so I don't really know what was used there.

1 The question I have is around to what
2 degree we, as a group here in this forum, define
3 that methodology, as opposed to the CEC and your
4 group defining that for us. And us commenting on
5 it.
6 But also, how we go about thinking
7 through that methodology, not only as it relates
8 to things like greenhouse gas emissions and
9 sustainability, but also capital efficiency, and
10 how to allocate these priorities.
11 I think that the thing I would be wary
12 of is in looking at a table like the one that we
13 see here in table 1, which has some very general
14 numbers for various categories of alternatives.
15 I think the risk is that we don't
16 necessarily know how these numbers are going to
17 change, not just for these categories, but within
18 these categories. There's a lot of regularity
19 within there, and you have solutions and
20 technologies that are being developed every day
21 within these categories that actually have much
22 better profiles than what we see on average.
23 And so I think we have to allow for
24 those types of technologies to get funding and
25 support. And I think that the way we have to

1 think about this is, you know, there are species
2 that are going to be very different within the
3 genus than the average of the genus. And I think
4 that, you know, the way that you can get to that
5 point, I think -- again, not having seen the TIAX
6 methodology -- is to figure out how to take all
7 the different categories of things that we care
8 about and create that screening criteria such that
9 there's a point system, and such that we can
10 actually grade these opportunities based on the
11 things we actually care about.
12 And making that as transparent as
13 possible, because the other thing I'll add is that
14 from an investment perspective, it's important not
15 just to know that the state is behind these
16 changes, so committing $120 million a year to this
17 program is critically important.
18 But that, in and of itself, is not
19 actually encouraging investment in the area. So
20 you actually have to have very specific criteria
21 for what boxes need to be checked, the types of
22 technologies and the types of areas that are going
23 to be funded in order to give the kind of
24 confidence to the investment community that they
25 can invest in an area.

1 So, you know, it has to be more granular
2 than that, and it has to be very transparent. To
3 the degree that there is, you know, it's behind a
4 screen and it's unknown how the selection process
5 will work, investors, I think, will just discount
6 that. And they just simply won't include it in
7 their calculus for what to invest. And so it
8 won't have the attendant signaling effect of
9 encouraging other dollars to flow into that space.
10 So I think there is an opportunity with
11 this to really influence where dollars flow, but I
12 think that it has to be very transparent.
13 The only other thing I would add that in
14 terms of the capital efficiency question, I think
15 it's important in that criteria to think about how
16 you select projects based on need as opposed to
17 risk.
18 So, you know, if the objective is to
19 maximize your dollars per impact for this program,
20 amount of dollars in, the amount of impact out,
21 you know, there's a propensity, and you've seen it
22 in some of the DOE programs, to go with the safe
23 bet.
24 So there is a, you know, let's go and
25 invest in the big commercial project that has big

1 commercial backers because when the public reviews
2 the success rate of this program, they're going to
3 say, well, job well done, you know, you put money
4 into a lot of good projects.
5 The problem is those aren't the projects
6 that necessarily need the investment. And so I
7 think that there is a, you know, a top 5
8 percentile which gets quite a bit of investment.
9 And, you know, everybody, project finance, venture
10 investors, they're going to be willing to go and
11 invest in those areas.
12 There's the kind of top quartile which
13 simply has a lot more trouble. And often it's
14 because they have marginal improvements, or it's
15 because their infrastructure plays, and the
16 technology risk associated with the benefit is too
17 high relative to the actual dollar benefit, as
18 opposed to the public benefit.
19 So, trying to figure out, I think, how
20 to include the kind of metric that allows us to
21 evaluate need, I think, would be really important
22 in the final methodology.
23 MR. WARD: You made a good point here.
24 In our previous infrastructure, this is just for
25 public entity infrastructures, having designed a

1 program that we would have a higher percentage of
2 funding for smaller projects. Because they are
3 basically the orphans. Everybody wants to join
4 the large projects to show that they're on a clear
5 winner.
6 And I think I'm taking that lesson from
7 that program forward with us here, because it's
8 not all the brightest and the best programs that
9 we should be funding. I think some that are more
10 cutting edge are much unheralded. So I think
11 those are the ones we'd like to focus on, as well.
12 VICE CHAIRPERSON BOYD: Jan.
13 MS. SHARPLESS: Well, I couldn't agree
14 more with the last speaker. That was sort of what
15 I took away from my read of the paper. I was
16 really looking for something that would tell me
17 how you were going to evaluate and prioritize.
18 I sort of fixed on table 1 and wrote in
19 the margin, is this the matrix that they're going
20 to use. And then I read further in the paper
21 where there were parts with recommendations and
22 comments. And I thought, well, do these two
23 things somehow integrate together.
24 So, I would agree that we need to take
25 all the good work that you've done, that staff has

1 done, and put it in some context.
2 I wasn't clear in the paper whether we
3 were trying to do the 2020 goal or whether we were
4 trying to do the 2050 goal. And I think somehow
5 that has to be decided. Somebody has to kind of
6 put the flag, you know, are we going to the moon
7 or are we going to Mars.
8 And I realize that some people are going
9 to want to go further out because there are
10 technologies that are currently part of the mix
11 that have a longer timeframe. And to them that
12 signals, well, you know, they actually want us to
13 do this and maybe we should do --
14 So, I think that should be a
15 consideration. But I do think you have to kind of
16 give somebody the line, Mars, you know, moon,
17 something. Something that will tell them that.
18 Also, having played in this game a long
19 time, I know that diversity, I know why we talk
20 diversity. I think it's wonderful that, you know,
21 we can have choices. Sometimes choices are a big
22 pain because it's hard to make a decision on
23 what's the best choice for you.
24 But in this context of diversity, I
25 really do think that I go back to some of the

1 comments that were made earlier about when you
2 talk about looking for diversity, I think you also
3 have to put it in the context of how are you going
4 to attract investment. How are you going to
5 attract. Government can't do it all.
6 So, what is your matrix. What are the
7 ones that you, you know, and you think of the
8 biomass area, Peter, you've mentioned, you know,
9 that California is really interested in not going
10 the way of earlier efforts, corn and soy, but
11 really going for something more sustainable. And
12 I think that's a very worthy goal. I would
13 encourage that.
14 Being somebody who's also very concerned
15 about public health, I would also raise the
16 caution that whatever path we pursue that I know
17 that on some of the biodiesel and biofuel options
18 they have done some chemistry analysis and looked
19 at, relative to existing fuels, how they measure
20 up.
21 I don't think that necessarily gets us
22 totally comfortable with what the health impacts
23 are going to be of those fuels. So, somehow I
24 think we have to be concerned about the health
25 effects, even if there's certain mass number

1 composition that are less than, it doesn't
2 necessarily mean that they're going to be healthy
3 for future.
4 And so I think we have to be concerned
5 about that. And that, I think, falls into where
6 the Air Resources Board is doing its thing that I
7 would be concerned about.
8 The other thing on this program is that
9 we've heard one speaker talk about a
10 demonstration. I, think John, that would be sort
11 of like a demonstration project where you would be
12 looking at the best environmental attributes, and
13 hoping to encourage that, because that's not
14 usually where investment goes, to help build the
15 investment base.
16 So, where does this program stand. A
17 certain amount of it's going to be demonstration.
18 But given the urgency, given that it's sort of the
19 desire to move things along that I think was the
20 impetus behind this legislation, you get the sort
21 of commercializations where it's at.
22 Commercializations where it's at.
23 So, somewhere this group needs to help,
24 I think, the Energy Commission figure out how do
25 you sort through that, you know. That there's got

to be some demonstrations. There's a lot of issues about commercialization.

Sort of rambled, but I guess I will pass the wand along, because I think I'm repeating some of the comments. But I do encourage us to do more, talk more about the actual, you know, not goals. You've got goals galore in here. But more specificity, more granularity, not to the respective identifying programs, but to identifying how you're going to prioritize this process, and how you will evaluate. Thanks.

MR. WARD: That's a good point. You know, whether we go -- there are some investments will be longer, I think, and some will be shorter, I think. The demonstrations will be longer, I think, than usual --

MS. SHARPLESS: I just -- as somebody who lived this last one, I just will comment. We had a really good program at the Air Board, and it produced a lot of wonderful electric vehicles that five to seven years later were called back and shredded. I hope we don't get into that kind of situation with the CEC program.

MR. WARD: I'd like to point out that Dr. Sweeney is on the phone and would like to make

1 a comment before we go next, if that's okay.
2 VICE CHAIRPERSON BOYD: Sure. Jim.
3 MR. SWEENEY: Yeah, thank you. I find
4 myself in profound agreement with a lot of things
5 that were said, particularly about the document.
6 And I don't get a sense of not just what
7 tradeoffs, but what concepts are going to be used
8 for the tradeoffs.
9 What are the driving ways of determining
10 where the state steps in and where you let the
11 private sector; where you count on the federal
12 government, given that we know in the future there
13 will be a different President than we currently
14 have.
15 So, I'd just like to endorse there's a
16 need for a more somewhere understanding that we
17 can handle what concepts are really driving the
18 choices.
19 Second, at a more detailed level, where
20 we get to the specific recommendation where we
21 jump to a high level of detail, some of it seems
22 hard to understand for me. I wanted to raise the
23 question about what was really intended and what's
24 the motivation.
25 For example, in second-year

1 recommendations, it says, create an alternative
2 and renewable fuel reserve to help stabilize
3 supply in crisis. Well, creating fuel reserves
4 are terribly expensive for what you get. And it
5 talks about stabilizing supply in crisis, you need
6 a very large quantity, not only of the fuel, but
7 of the storage facility of the fuel.
8 So, I'd like some comments on why that
9 is chosen as a way of what seems to me as a
10 fundamental transformation, a transformation of
11 making these alternative fuels more viable.
12 And then second, there's something I
13 think I know what it means, but it says under
14 infrastructure for second year, implement a
15 program to provide alternative fuel purchase
16 discounts for consumers and fleets.
17 Does this mean simply a state subsidy
18 for these things? And are we talking a large
19 subsidy, or is alternative fuel purchase discounts
20 something different than just a pure financial
21 subsidy? And what's the concept here that is
22 driving this -- recommendation?
23 And the third question I have is does
24 the idea of a million dollar public relations
25 campaign for alternative fuels and vehicles. To

1 me, if the idea is getting the technologies ready
2 and available, why is this proposing spending a
3 million dollars on a PR campaign at this time?
4 Those are my specific questions that I'd
5 just like to get some sense from the staff of why
6 those are being proposed.
7 And I'll end at this point.
8 MR. WARD: Okay, thank you, Dr. Sweeney.
9 I would like to, I guess, comment on one I'm more
10 familiar with, and that is I think the idea of the
11 fuel reserve that was placed in this as an
12 opportunity, I think this harkens back to the
13 methanol demonstration where we had a California
14 fuel methanol reserve that was established to
15 approximate the price of methanol, which was a
16 chemical commodity at the time, to the price you
17 would see in a mass introduction as a fuel.
18 That was a paper reserve. The Energy
19 Commission served as an interested third party
20 arm's length, and carefully chartered that reserve
21 to avoid antitrust.
22 What we were doing in those days was it
23 was a paper reserve. We called on suppliers to
24 make supply commitments. And there were about six
25 or seven different suppliers.

1 We asked for their commitments and we
2 had one person at each of the terminals north and
3 south. They had the product and we basically
4 directed traffic from the suppliers to the
5 producers. And then it really didn't cost much,
6 other than staff time.
7 We're not talking about strategic
8 petroleum reserve counterpart for alternative
9 fuels here.
10 MR. SWEENEY: If that's all you mean is
11 simply a paper -- really, a way of smoothing out
12 the flow, then I have no concern.
13 MR. WARD: Smoothing out the flow,
14 perhaps improving the price. And I would
15 personally, my preference is that of a price
16 subsidy, because I think that actually makes it,
17 over a long term, a more viable proposition than
18 subsidizing fuel.
19 But your third point I think you may
20 have misconstrued in the investment plan that we
21 were recommending a million dollar public
22 relations contract. And I believe that is under
23 in the alternative fuels incentive program that we
24 and the Air Resources Board jointly planned. That
25 is a contract that is in force right now.

1 MR. SWEENEY: So, this is a proposal --
2 and this other thing that would provide
3 alternative fuel purchase discounts, is that -- I
4 don't understand what that means. I read it as
5 just an alternative fuel subsidy. But I don't
6 know if you mean something entirely different.
7 MR. WARD: I think you've hit on what is
8 probably intended by those words. As I mentioned,
9 I think the reserve concept works a little better
10 if you can get voluntary commitments from
11 suppliers at prices that are more gasoline-
12 equivalent. I think we're referring primarily to
13 ethanol, because ethanol can command any prices of
14 gasoline blend stock. And has to have precise
15 pricing for E-85.
16 MR. SWEENEY: Okay. I would suggest
17 that with all of the new evidence that when we
18 transform foodstock to fuel we're really probably
19 having a negative impact on carbon -- because that
20 would mean you create the relaxing more to your
21 impacts on the world food market and your
22 conversion of other crops, that we certainly don't
23 recommend a subsidy on the ethanol.
24 It's already environmentally trouble
25 enough as it is. The ethanol from corn based. So

1 I hope that we go away from providing this subsidy
2 program for such fuels. But that's just my own
3 take on this.
4 MR. WARD: Thank you for your advice.
5 VICE CHAIRPERSON BOYD: Thanks, Jim.
6 Allan Lind.
7 MR. LIND: Thank you very much. I'll
8 try to keep this as short as possible because
9 there are so many other people who wish to speak.
10 And I'm not expecting an answer to this.
11 But, and I'm not to the meat of the
12 matter, I think I'm still at the salad stage here.
13 I'm trying to understand what should be in an
14 investment plan.
15 One of the things that I would like to
16 see is a little more context with regard to other
17 financial incentive programs. And, of course, the
18 Carl Moyer program, Prop 1-B, and even local air
19 districts have their programs.
20 And the observation I would make,
21 another observation I would make is that there's
22 no mention of some of the bread-and-butter
23 programs that are going on right now, whether or
24 not they need more assistance, like the
25 accelerated vehicle retirement program, or

1 enhancing the smog check program to get the same
2 kind of emission reductions. And ultimately move
3 that older fleet out of the -- that older segment
4 of the fleet out of the marketplace.
5 And there was one other point here. It
6 just occurred to me, I don't know what thought, if
7 any, you're giving to the effect of gas prices
8 today. But I have a feeling that there is going
9 to be a dropoff in revenues to the gas tax. That
10 pays for highways.
11 But understandably there's probably
12 going to be quite a windfall for the sales tax on
13 transportation fuels. And so in an investment
14 plan I would hope that you'd give consideration to
15 these other revenue sources and whether or not
16 they can make a -- how they can best compliment
17 the goals of AB-118.
18 And then make it clear that AB-118 is
19 not duplicating those other funding sources, and
20 just how it fits into that context.
21 MR. WARD: Thank you. We do plan more
22 intense investigation of current and existing
23 incentives so that we can mesh up fairly well with
24 that.
25 VICE CHAIRPERSON BOYD: Let me just

1 interject right now a procedural question of the
2 committee. It's a few minutes to noon. We're way
3 behind what was laid out as a potential schedule.
4 I need to know the ability of committee
5 members to tough it out for a long haul here.
6 What I'd like to do is finish going
7 around the table. And then whatever time we
8 finish doing that, talk about the idea of taking a
9 lunch break and then hearing from the public.
10 But I don't know, I need some indication
11 of whether you all can stick around, or whether
12 you'd just prefer to press on until we finish.
13 (Chorus of "press on".)
14 MR. SPEAKER: I have to pick my daughter
15 up at 5:00.
16 (Laughter.)
17 MR. BRUNELLO: Can I just make a
18 recommendation, and maybe move along, but just if
19 people could keep their comments short, I think
20 everybody's going to have the same comment that
21 essentially we need to completely revise this and
22 have comments. So, I think we need to have -- for
23 you guys. We're going to go back with the draft
24 that will be simple and something that's
25 straightforward.

1 I think the second thing that I was just
2 asking about was you guys need to complete this by
3 October, is that right?
4 VICE CHAIRPERSON BOYD: That's what the
5 staff laid out earlier today. They'd like to see
6 it done by --
7 MR. BRUNELLO: So, I mean you have a
8 brain trust here; incredibly bright folks. And
9 everybody's going to have their own ideas. So I
10 think -- I commend you. I know we talked about
11 this before, this is extremely difficult to do.
12 But some way that, again, just gets input from
13 these folks, because it sounds like nobody has
14 really commented on.
15 So I think something that everybody, the
16 committee would know is simple and needs to
17 provide direct comments in a short amount of time
18 so that the Energy Commission could use them,
19 would be extremely valuable.
20 So, I'd just add that I hope that -- I
21 don't want to be here till 5:00. And I think a
22 lot could be done after this on comments to more
23 specific criteria, that everybody's going to have
24 an idea on how to do it differently. And --
25 VICE CHAIRPERSON BOYD: Well, I know

1 Commissioner Douglas and I have already talked
2 here about the idea of the staff taking everything
3 they've heard today, create, you know, redraft the
4 document. Distribute it to all the Advisory
5 Committee Members and post it for public
6 consumption. And ask for written feedback well in
7 advance of any additional committee hearing.
8 I think it's necessary to do what we're
9 doing today, but I think henceforth we can pick up
10 the pace and do less face-to-face, and more just a
11 written exchange. We'll provide the email
12 addresses, or you have them for all the committee
13 members, so you can share everything with
14 everybody. That's a thought we're having as a
15 result of hearing what we've heard today.
16 And you've got to recognize the press,
17 the press -- the staff was being -- boy, that was
18 a Freudian slip -- the staff --
19 (Laughter.)
20 VICE CHAIRPERSON BOYD: -- the staff was
21 being let's just say governmentally conservative
22 and cautious in what it is they put on the table
23 today in order to get you to make, to volunteer
24 lots of areas where you think we need to have some
25 emphasis. And to avoid any kind of debate about,

1 you know, dollars that they might have put in one
2 category versus dollars in another category.
3 I think some of us wanted to see the
4 categories that you all thought were important and
5 those subject areas you all felt needed to be
6 addressed. And then, you know, put something real
7 meaty out for you to have at it.
8 I think that's the process we'll follow.
9 And maybe we should have said that at the
10 beginning. But I don't think we exactly knew
11 where we were going until we heard some of the
12 initial comments. And it is kind of a pile-on,
13 though. But everybody seems to have some of the
14 same feelings.
15 Tony, you made a good point.
16 COMMISSIONER DOUGLAS: Interestingly,
17 the direction from the Advisory Committee, that
18 side, at least, has been fairly clear. I think it
19 would be really useful if we were able to have at
20 least one extra iteration of the draft for the
21 next in-person meeting.
22 And I also, having observed now one and
23 a half Advisory Committee meetings, think we might
24 really benefit from written comments in addition
25 to the face-to-face interaction.

1 So that's the direction that we were
2 just whispering about, right on time for the
3 question from Tony.
4 And I guess with that we'll continue our
5 trek around the room.
6 VICE CHAIRPERSON BOYD: And I think I
7 heard a "press on" more than not.
8 COMMISSIONER DOUGLAS: Did we hear
9 support for a lunch break, or did we hear press on
10 till the --
11 VICE CHAIRPERSON BOYD: I heard press
12 on.
13 VICE CHAIRPERSON BOYD: -- bitter end?
14 VICE CHAIRPERSON BOYD: I saw a lot of
15 press on's.
16 COMMISSIONER DOUGLAS: Okay.
17 VICE CHAIRPERSON BOYD: We'll press on.
18 MR. BRUNELLO: So I just wanted to talk
19 for the next 20 minutes about --
20 (Laughter.)
21 MR. BRUNELLO: My main comment was,
22 again, just for clarity, if there's a process that
23 can show how -- sorry, bad humor --
24 (Laughter.)
25 MR. BRUNELLO: -- just a process for the

1 things that you want incorporated, and then to let
2 this group, which is again an incredible group, --
3 Mars, moon, and genus species that can translate
4 into the document.
5 And also, but understanding, as well, to
6 be clear to the group on timeframes. Because,
7 again, if you guys really need to push this by
8 October, the documents you're going to get could
9 be, you know, 100 pages of theory versus practical
10 things that you want to see incorporated.
11 So, the two actual -- the other thing I
12 wanted to ask about was just, and we should just
13 steamroll right through this, but how increasing
14 gas prices are included into some of the tables,
15 and how it might affect investment decisions.
16 There's some tables in the investment
17 plan. So, it would be just interesting to know
18 how that might be incorporated. I know for a lot
19 of the greenhouse gas reduction economic modeling
20 has been a fiasco, from what I've been told, on
21 how to model gas prices.
22 The second is just talk again about
23 forestry and biomass. I just came from a Board of
24 Forestry meeting where we're in the same boat in a
25 different world of trying to figure out how you

1 utilize more biomass to reduce bio-risks and to
2 promote sustainable forest harvesting.
3 So this is another leg of the stool,
4 figuring out how you actually utilize that
5 biomass. And I think there's plenty of
6 opportunities between the groups, between the
7 climate and forestry and this fuel group.
8 So, that's it for me. Thanks.
9 VICE CHAIRPERSON BOYD: Thanks. One
10 comment. Jan's the Mars versus the moon, that
11 didn't get responded to.
12 I think we're already pledged to go to
13 Mars. I think the AB-1007 plan has a 2050 vision
14 in it, and that's what we adopted jointly between
15 the two agencies. So that's, you know, our
16 horizon is way out there.
17 COMMISSIONER DOUGLAS: I think, if I
18 could add to that, I agree we should be clear. My
19 thinking is that we want to build a bridge to
20 2050, and Commissioner Boyd and I have discussed,
21 you know, when you do that you probably start with
22 the materials you have in hand, but you've also
23 got to make sure that you're building in the right
24 direction, and that your goal is 2050.
25 So, these are, to some extent, policy

calls shaped by the legislation that should be made more clear to the Advisory Committee. But we also, again, want input on that vision and whether there is agreement on that kind of direction.

VICE CHAIRPERSON BOYD: Thanks. Tony, you through?

MR. BRUNELLO: Yes.

VICE CHAIRPERSON BOYD: Very prompt. Good.

MS. MONAHAN: I'm not going to reiterate what everyone else has said, but just a few comments.

In terms of the LCA analysis, because it seems interesting to me that there wasn't a direct reference to the CARB regulatory process that's ongoing. CEC has a version of the GREET model; CARB is modifying that. And it seems appropriate that we should use one single model in California, and not obfuscate and not have competing models. So I'd recommend a clarity around that issue, the LCA calculation.

And second, as somebody who's involved in the peer process, I thought that that actually was a fairly good process for getting input from the stakeholders and use the great WebEx format,

which I think actually could work for this group as a way for us to have input.

I think just relying on written comments will, for those of us that are busy, which I'm assuming is just about everybody in this room, it gets challenging to write extensive comments. It's a lot easier, actually, to get comments verbally.

So, I would encourage CEC to explore those kinds of opportunities to have virtual meetings with this illustrious group.

And last, I think it's important to look for synergies as much as possible. So as we're highlighting, I think, appropriately the GHG and the meeting our climate goals as the overarching sort of guiding principle from AB-118 disbursement of funds, we also should highlight, where possible, to look for programs that can also reduce public health impacts from traditional air pollutants; and also to promote sustainable fuels at the same time.

So, to really highlight that, we're looking for those synergies as we are prioritizing meeting our final goals. Thank you.

MR. CACKETTE: I have a couple

1 suggestions that would hopefully improve the next
2 version of this. The first one is that I think
3 the plan needs to be goal-driven. Meaning we have
4 to establish what are the goals, and then work
5 backwards from those. Because some are 2050, some
6 are 2020, so 2030, things like that. Work back to
7 figure out what do we need to be doing today, or
8 in the next two or three years in order to support
9 achieving those goals.
10 And to do that I think we need to
11 clarify what our goals are. I think that the
12 greenhouse gas goal is the prime -- it has primacy
13 here. That's what the law says.
14 And don't mean this as a criticism,
15 Peter, but when the slides came up we talked about
16 AB-32 and the 2020 goal. But, in fact, the
17 greenhouse gas goal is a 2050 goal; it's a goal
18 because the Governor passed an executive order
19 that says that's what the goal of the state is.
20 So I think it has equal importance, the 2050
21 greenhouse gas goals as the 2020.
22 The other goals that have been laid out,
23 to me, at least, were a little bit confusing. For
24 example, we talked about some of the IEPR goals of
25 alternative fuel percentages, which have been

adopted by the state, 20 percent of fuels in 2020.

And then there's discussion about the low carbon fuel standard. The low carbon fuel standard is not a goal. In fact, compliance with the low carbon fuel standard cannot be funded by 118. It's going to be a regulatory mandate.

And so it's not a goal, in itself. And I think we need to separate what are goals and what are programs. If we're going to include programs, which we need to acknowledge their existence and how they affect the goals, then we need to be more complete.

Spend time on low carbon fuel, spent time on the hydrogen highway, is that a mandate, and various other things that would influence how we -- where that pathway towards the goals are.

And so I'd like to see those clarified, and sort of be clear, what are the goals that we're going to work towards.

And then so the second part would be how do we work back and figure out what this -- what we need to do in the next two years if we have a goal that's 12, 22 or 40 years away.

And I think that could be an analytical process. For example, if you look at the 2050

1 goal for greenhouse gases, there are three fuels
2 largely identified that could help meet our goals,
3 and are necessary to meet the goals, other than
4 petroleum. And petroleum is, and 20 or 30 percent
5 of them being 70 or 80 percent is going to have to
6 be low carbon other fuels.
7 And if we start off recognizing that,
8 that's in the 1007 report, we can go back and
9 figure out how long would it take to get vehicles
10 into the fleet that use those fuels; how long will
11 it take to ramp up from a niche market level like
12 the current hybrids are, to some major penetration
13 of that vehicle and its fuel into the fleet. Like
14 30, 40 percent, something like that.
15 How long will it take to get from where
16 we are today to that niche -- even that niche
17 level. How do we get from 100 vehicles of one
18 fuel or none, to 2 or 3 percent. And when you
19 work that out you find that you're right back here
20 of today. You're in this 2008 to 2015 timeframe
21 where if you don't take steps now, you will fail
22 to meet that 2050 goal.
23 So I think you can do that kind of an
24 exercise. Then you should look at -- and do that
25 one first. And then you can look at the other

1 goals.
2 For example, if achieving the 2050 goal
3 for greenhouse gas does not get you 20 percent
4 alternative fuels, in 2020, one of our other
5 goals, then you would add, plan to add in the
6 opportunity to fund other fuels that might meet
7 that goal.
8 And you can add up all the goals and
9 build a investment plan that would suggest where
10 we want to put our money to achieve all of these
11 goals that we would more clearly identify in the
12 plan.
13 That would get us to the point where
14 people who want to bid on this money would clearly
15 understand, you know, we do want to put money into
16 electric infrastructure, we do want to put money
17 into helping certain type of vehicle buy down its
18 cost. We don't want to put -- I'm not prejudging
19 this, but just on what Jim Sweeney said, we don't
20 want to put money into corn ethanol. We do want
21 to put money into cellulosic processes, because
22 they don't exist right now.
23 And then we go back and figure out if
24 that's necessary, given, you know, the UC system
25 and Stanford's massive research programs to help

1 develop cellulosic biofuels, and test this against
2 what the rest of the world is doing.
3 But I think that way you could actually
4 come out with a plan that tells the bidders what
5 our priorities are. And it would be quantifiable,
6 and we'd have numbers with it and everything. But
7 it doesn't have to be completely exclusive to
8 think that we could guess what the great ideas
9 are. But at least it would provide a direction.
10 And from some of the mandates, when we
11 lay that on top of that we could see what kind of
12 vehicles and how many vehicles will be available
13 in this timeframe as requirements, for example.
14 And that could help gauge what kind of
15 infrastructure we need, what kind of support maybe
16 is necessary based on how expensive or futuristic
17 those vehicles are, and their state of
18 development.
19 So that's what I'd like to suggest we
20 get to by, you know, attempt to do that by the
21 next draft.
22 MR. COOPER: Well, talking about
23 priorities from a little bit different angle, when
24 I first looked at the draft investment plan I
25 looked for commission on job training and green

1 jobs and turned to page 9. And I know that I had
2 made a couple of comments at the last meeting
3 about some suggested priorities for what kind of
4 job training should rise to the top of the issues,
5 such as wages, benefits, turnover rates, proximity
6 of the labor market to the production process,
7 those issues.
8 And I didn't see that in there. I
9 didn't see some good language, a good beginning
10 around job training and skill development. And
11 I'd like to see that fleshed out a little bit
12 more, including a reference to collaboration with
13 labor/management partnerships throughout the
14 state; and collaboration with labor apprenticeship
15 programs throughout the state. So, as I develop
16 my written comments you'll see that reflected in
17 there.
18 Another point I wanted to make briefly
19 is that green jobs often get headlines or get
20 notice in the print, but when it comes to funding
21 often it gets short shrift.
22 And I've heard from other committee
23 members that this is a priority of this program.
24 I think it's important to reaching the goals that
25 we set forth.

1 And I think that we should consider
2 having a threshold of perhaps 10 percent of
3 funding, at least 10 percent would go to job
4 training and workforce development issues just to
5 make the point that it won't get short shrift this
6 time. That it is a key ingredient to moving
7 forward.
8 And lastly, I wanted to mention that as
9 far as partners, at the California Labor
10 Federation, in our workforce program, we've worked
11 with a government body called the Employment
12 Training Panel. I also work with the
13 manufacturers on training programs.
14 And they have a -- I think that's one
15 body that we should look at working together with
16 and structuring our programs to give priority to
17 projects that also draw funds from the employment
18 training program.
19 They have a series of criteria for their
20 training, as I mentioned, things like the turnover
21 rates; and how programs have functioned in years
22 out. And if workforce development has fared well,
23 if workers have moved up through career ladders
24 over the course of the four years, or however many
25 years projects have gotten funding.

1 That's all considered when employers or
2 other groups come back for additional funding from
3 the employment training panel.
4 So I will flesh that out a little bit in
5 my written comments. And I'd be interested in
6 hearing any comments from the committee members.
7 MS. DIN: My comments are also on the
8 issue of economic development. And I was actually
9 very pleased to see this slide and the emphasis
10 from Mr. Ward in the broader area of economic
11 development.
12 And the three areas that are highlighted
13 in this slide are manufacturing, specifically
14 instate, attracting businesses in alternative
15 transportation technology to California, as well
16 as workforce development.
17 And these three areas mirror the
18 priority areas within the ETAAC report, which is
19 the AB-32 implementation committee economic
20 technology advancement advisory committee.
21 The specific programs that are
22 recommended in that report include one, by
23 California instate program that boosts
24 manufacturing in clean technology. And this is a
25 way to take advantage of the lower carbon content

1 of those products that are produced here.
2 There are a number of states that have
3 these aggressive programs, such as Oregon and
4 Washington and New York. And we're at a
5 disadvantage because we don't have them.
6 The second, as Peter mentioned, is a
7 very comprehensive workforce training program.
8 The draft here focuses on professionals, and I
9 would just encourage a focus on all of the
10 different skill levels.
11 And the third has to do with the
12 manufacturing attraction program for California.
13 There are a number of barriers in this state to
14 establishing and retaining manufacturing. We lost
15 about 20 percent of our manufacturers since about
16 late 2000.
17 And part of the problem is that we have
18 a double manufacturing tax. We're one of only
19 four states that have this. The others being
20 Alabama, South Dakota and Wyoming.
21 And what this is, it's a sales tax on
22 the equipment that are purchased by manufacturers.
23 You may have heard about the Governor's
24 announcement that is attracting Tesla to the state
25 to manufacture their second generation vehicles.

1 This is very exciting news. And the reason they
2 are coming here is because that tax has been
3 waived in a partnership with CAIPFA, within the
4 treasurer's office.
5 So I would just recommend that these
6 three programs be adopted by this investment plan.
7 And I'd be happy to work with staff to help fill
8 in those details in table 3.
9 Thank you.
10 VICE CHAIRPERSON BOYD: Thank you.
11 MR. WALSH: First of all, compliments to
12 Peter and the staff. I think they did a very good
13 job of laying out the starting point for us. And
14 I won't repeat, I think, Tim, I agree very much
15 with your comments in terms of how we should move
16 forward.
17 At the last meeting I asked for a copy
18 of this document, as I had not seen it before. I
19 guess everyone refers to it as the 1007 report.
20 But I thought it was a very illuminating report.
21 I enjoyed reading it, and I found especially the
22 visionary chapter, which sort of lays out a
23 roadmap or roadmaps to eventually achieve going to
24 Mars. And I do agree we should be going to Mars,
25 and not just to the moon.

1 And the way, I guess, Tom, you just laid
2 out in terms of backcasting from that. If you
3 take that as your starting point and then try to
4 work your way back and see where are the gaps,
5 where are the things that do need funding.
6 I think it's very important, people have
7 touched on this a little bit, but not, perhaps, as
8 explicitly as I would like, that we should
9 differentiate between the things that can be
10 driven by regulation, as opposed to the things
11 that regulation can't necessarily drive, or at
12 least regulation as the laws currently exist.
13 And I think, for example, in the case of
14 fuel efficiency of conventional vehicles, I think
15 regulation can probably drive that process. And
16 investing in fuel efficient technologies is
17 probably not a very good use of the funds
18 available here. Whereas things like the hydrogen
19 infrastructure would benefit, draw a distinction
20 there.
21 Somewhat related to what Patty raised, I
22 think that there's a growing scientific consensus
23 that many of the pollutants that we worry about as
24 urban air pollutants, conventional pollutants, are
25 greenhouse gases.

1 And I wonder if we're going to have a
2 mechanism for bringing that into the process as
3 that science evolves. And I'm thinking
4 particularly the one that we're most focused on,
5 ICCT is most focused on, black carbon, which is a
6 significant component of the diesel particulate.
7 And we're organizing, in fact, a
8 scientific workshop on that in London in
9 September, trying to bring together some of the
10 preeminent scientists in that field to see if we
11 can get a consensus.
12 But without a consensus on the precise
13 number there does seem to be a consensus that
14 black carbon is a very potent greenhouse gas. And
15 so somehow if we can bring those kinds of things
16 that the tropospheric ozone, the background
17 tropospheric ozone seems to be driven by NOx as
18 the principal driver.
19 So somehow, over time, not necessarily
20 this first iteration, but have a process for
21 bringing the emerging science into this debate,
22 and into the funding process, I think would be
23 very useful.
24 Just a comment, as a Washingtonian,
25 there are a lot of us outside of California that

1 also hope that California doesn't get preempted
2 too much.
3 (Laughter.)
4 MR. WALSH: We think you tend to drive -
5 - the phrase I use is, California's the stick that
6 stirs the drink. And we want you to keep
7 stirring.
8 MR. KAZARIAN: I share Tommy's thoughts.
9 I want to move this along, so I'll keep it short.
10 I just want to echo one point, Will and Carla also
11 said it, in terms of attracting investment and
12 creating the detailed plan to do that. To
13 identify the best way to attract investment to the
14 clean tech cluster. Our work at BT&H in
15 identifying public/private partnerships, also for
16 direct investment, and increasing that. It's a
17 wonderful opportunity to go hand-in-hand with this
18 and to meet our goal.
19 I know KIA, I'm not sure of the clean
20 tech component, but they just opened a plant in
21 Irvine, could form jobs, state-of-the-art facility
22 for vehicle design. So it's a wonderful
23 opportunity to do that.
24 Thanks.
25 MR. McKEEMAN: I, too, will be brief.

1 One of the things that I brought up at the last
2 meeting was the conundrum that we have regarding
3 fuel diversity and the current liquid system that
4 basically relies on homogenous fuels, basically
5 gasoline and diesel are pretty much intermixable
6 in the transport delivery system. And if we're
7 talking about a variety of different fuels, as we
8 play out into various fuels that have different
9 carbon footprints, that talks about a fairly
10 diverse set of fuels that are out there.
11 And I would suggest that a stumbling
12 block to getting that out there is in fuel
13 storage, both at terminals and bulk storage plants
14 in the state. And if there's, I think, with
15 fairly small investments, large changes or
16 significant changes can be made in the roadblock
17 that lies there.
18 The important issue there is that most
19 of that storage is owned and operated by small
20 businesses. So there may be a regulatory
21 requirement to do something, but if there's no
22 financial wherewithal to take care of that, a
23 problem needs to be solved.
24 So, I just kind of -- yes, we need to
25 look at Mars, but there are steps along the way

that we have to also observe and try to keep, make sure that we got our eye on the short term as well as the long term in getting to the ultimate goal.

Thank you.

MR. SHEDD: Thank you, Peter, for getting this discussion started. To give you a little bit of a different perspective, from an agency that's been involved in different alternative fuel demonstration projects over the last 20 years, the M-85, the electric vehicle project, hydrogen fuel cells currently, E-85 if you want to consider that a demonstration project or not.

Some of the lessons that we've learned is that without a coordinated effort between the vehicle technology and the infrastructure for the fuel, it's destined for failure.

And what I would suggest to this committee and to the plan going forward is to, as I reviewed table 3, not think so much of having infrastructure so separate in the discussion from the fuels or the vehicle technologies.

Because I think one of our most successful demonstration projects was the EV Sacramento project. And it was a combined effort,

1 public/private joint effort between the City of
2 Sacramento, the Air Resources Board, SMUD and
3 state agencies that pooled their resources to make
4 sure that the manufacturers of these vehicles had,
5 we could put them in play, we could actually use
6 them. We could actually drive them around. We
7 could park them. We could charge them up.
8 And so we have the experience in knowing
9 what is successful and what isn't. We've come
10 under criticism for having put the chicken before
11 the egg, or the cart before the horse buying E-85
12 vehicles when there's not a sufficient
13 infrastructure of the fuel to actually put the
14 fuel in the vehicles.
15 We're desperately trying to get that
16 fuel infrastructure built. We do it, in some
17 degree, on our own, state agencies. But the
18 public is more inclined to need the private sector
19 commercial stations, as we are. We are highly
20 dependent upon that.
21 And so if we don't have the available
22 fuel resources out there, putting funding into a
23 certain technology of a vehicle isn't going to get
24 us where we need to get. We actually have to have
25 that combined effort between the two.

1 So, that would be my suggestion, that we
2 look at that holistically, and not as a separate
3 entity where we fund a vehicle technology one year
4 and then look another year for an infrastructure
5 funding. I think they have to be looked at
6 together.
7 MR. HWANG: Just very quickly in the
8 interests of time. I now appreciate, Commissioner
9 Boyd, your statement about not putting a specific
10 proposal on the table for division for funding.
11 That was a very wise move on the Energy
12 Commission's part. So I appreciate that.
13 In terms of where we want to go the next
14 steps, it sounds to me like, just putting a
15 strawman on the table here, what would be useful
16 is for the Energy Commission to work very quickly
17 on perhaps putting a strawman central framework
18 out for how you'd go forward with doing this
19 analysis about how this investment plan would look
20 more quantitatively on proportions of spending and
21 where you spend; what kinds of projects you might
22 spend it on.
23 So, conceptual framework, perhaps if
24 that could be done rather quickly, say in the next
25 two to four weeks, send it out maybe to the

1 Advisory Committee or what-have-you, or broader.
2 Get feedback to make sure that we're kind of on
3 the right track before we head into the direction
4 of putting some numbers on the table and maybe
5 picking some winners or losers.
6 I would suggest that the strawman,
7 listening to some of the group around here, that
8 this central framework might have four steps. I'm
9 a little -- just on the fly, so I'm open very much
10 to other iterations of this.
11 But step one seems to me that if you
12 first would screen the different technologies and
13 fuels for ability to contribute to climate change
14 goals, and that would be particularly -- 2050.
15 So certain fuels would not make that
16 cut, and I think that's appropriate in terms of
17 this, and in fact I would argue that it be
18 inconsistent to funding projects -- or can't
19 substantially contribute to our long-term goals.
20 Second, I think you would want is a more
21 detailed roadmap, as Tom Cackette was suggesting,
22 about within each one of these buckets of
23 technology, or between these fuel pathways, where
24 we want to be in 2015, 2020, 2030, et cetera. How
25 much money we might need, especially public

1 funding we might need, to move those technologies
2 along in a path.
3 I think we need to have some sort of
4 measuring that 2015, 2020 we're kind of on the
5 right track. We also maybe need some sort of
6 metrics to understand where public funding might
7 be most beneficial.
8 And that's actually step three, I would
9 say, after you do the pathway analysis is to look
10 at the need for public funding. And I would
11 include you gap analysis, et cetera. But where,
12 and perhaps speak to of what Will I think was
13 speaking to about capital efficiency, where would
14 public funding best most leverage additional
15 funding from private sector, in particular, might
16 be another. I think we all agree the private
17 sector funding, you know, we need to figure out
18 that we're not being duplicative with federal
19 funding, et cetera.
20 Step four I would suggest would be some
21 sort of scoring criteria, the way that I think
22 Peter was suggesting, which I would agree, should
23 be part of this project, final project selection.
24 A scoring criteria, after you move
25 through all the other steps, would look at things

like criteria pollutants, water pollution, sustainability standards, petroleum reduction, local economic benefits. Probably some other scoring.

So that's a strawman, just for some discussion, and I'm very much open to thinking about it. But that's the way I think of the steps, listing to this group, and also the kind of hierarchy which you might follow in order to insure that the overall plan is consistent with where we want to head. I'm hoping that we can, you know, perhaps get that done in kind of a quick timeframe in terms of at least putting a strawman from the staff in the central framework.

MS. HOLMES-GEN: Okay, I just want to comment that I do feel very protective of this funding. It was very hard won from the Legislature. And there's a lot of eyes watching this process, because the investment plan is truly the heart of the 118 program. And this is really what's going to determine how effective this funding will be over the long term. So this is very critical and we have to treat it very cautiously how we move forward here.

I think there's been a lot of excellent

1 comments and I certainly don't want to be
2 repetitive, I just want to state very briefly that
3 the public -- I think this plan needs to
4 demonstrate very clearly to the public and to the
5 Legislature how these funds are going to move us
6 more quickly to fuels that will be sustainable in
7 the 2050 timeframe.
8 So I really appreciate the discussion
9 about we're going to Mars, and, you know, topic of
10 discussion about that means we need to start now.
11 So, that means we need, as we discussed,
12 much more clarity and focus and focusing on a few
13 categories of technologies that truly have promise
14 over the long term. And truly can be sustainable,
15 and lead us to that transformation. And I just
16 wanted to emphasize that, that the legislation
17 talks about transforming California's fuel and
18 vehicle types. And we're not going to achieve
19 that transformation if we're treating these funds
20 as funds that should be available to as many fuels
21 as possible. So that's why we need this clarity
22 and focus.
23 And I think also that the 2050 vision in
24 the report is a good guide, and that that focus
25 that's suggested in there on electricity, fuel

1 cells, advanced biofuels is a good guide for this
2 plan.
3 And I also wanted to say that I do think
4 the plan needs to give very clear signals in terms
5 of biofuels, that the funding should go to
6 advanced second generation biofuels. With all the
7 discussion, all the controversy clearly the need
8 is for research and investment on the next
9 generation to get beyond some of the land use and
10 sustainability concerns that we're all grappling
11 with. So I think there needs to be very clear
12 signals on that.
13 Looking beyond crop-based fuels. And I
14 think the TIAX proposal, I'm looking forward to
15 hearing the presentation. I think that should
16 provide a good guide to the Energy Commission,
17 also.
18 I also think that we should have some
19 discussion about air quality criteria in this
20 group. I know there's a separate process at ARB.
21 But I think that air quality concern is important
22 to many of us in terms of insuring that the fuels
23 that we are investing in are not going to create
24 air quality problems. And, indeed, will help us
25 move toward, you know, further toward our air

1 quality goals. And I think we might want to have
2 a little discussion about the kinds of criteria
3 that should be applied to these fuels.
4 And finally, I think in terms of the
5 timeframe, that we need to find a way to plan on
6 at least one additional Advisory Committee
7 meeting. I think many of us feel that there's a
8 need for another meeting, that we cannot pack it
9 all into another meeting, you know, two- or three-
10 hour meeting in September.
11 We're talking about a major revision of
12 this proposal next month, and I think we need to
13 have at least, you know, two other committee
14 meetings to really work with the content of this.
15 Because this is so important, this is the heart of
16 the program, and this is -- you know, these funds,
17 again, need to be carefully invested in the public
18 interest to insure that we truly are getting to
19 the 2050 goals, and that we're making those steps
20 now to get there.
21 So, I appreciate being part of this
22 process, and thanks for listening.
23 VICE CHAIRPERSON BOYD: Thank you.
24 Brett Williams who is sitting in for Dan Kammen,
25 on the phone. Brett, did you have any comments

1 you wanted to make?

2 MR. WILLIAMS: No, actually I thought my

3 hand was up virtually and my hand was not getting

4 at all tired, so --

5 (Laughter.)

6 MR. WILLIAMS: -- let me just comment.

7 Everything's been covered. I would reiterate

8 support for developing multi -- analysis framework

9 that will help us evaluate having clear criteria

10 to specific program goals. (inaudible) these sort

11 of analogies with other initiatives that have been

12 mentioned today, related initiatives.

13 But also the question about subsequent

14 to setting up a framework which will sort of give

15 us something to comment on, but not without the

16 intent to provide final answers, is there an

17 evaluation component that would be set up in a

18 transparent way that will help refine the

19 investment plan as it goes forward, and to capture

20 lessons learned.

21 Really, everything else has been said

22 today. Thanks. Oh, and I'll definitely circle

23 the wagons with Dan Kammen, who's in Indonesia and

24 was hoping to call in today, but apparently he

25 didn't get a -- all the way here. So, thanks.

1 VICE CHAIRPERSON BOYD: Thanks, Brett.
2 Okay, we've heard from the Advisory Committee.
3 And I've got a few blue cards from the
4 public. I don't know if we did make an
5 announcement at the beginning that if you would
6 like to say something it would facilitate things
7 if you'd fill out a blue card from the back of the
8 room. And we'll operate off of them.
9 So, I'm going to go in the order of blue
10 cards that I've received so far. And those of you
11 who didn't get one, grab one quick and get into
12 the process.
13 First card I got was from Mike Jackson,
14 TIAX. So, kind of timely.
15 MR. JACKSON: Thank you, Commissioner
16 Boyd and Advisory Committee, for taking the time
17 to listen to some of our comments. If I could
18 have my presentation up, please.
19 We did some work for Southern California
20 Edison, and they basically came to us with sort of
21 the assignment of a clean piece of paper saying
22 give us your thoughts on how you might allocate
23 the funding for AB-118. And I'd like to share
24 with you -- Peter, if you could go to the start of
25 it, please -- I'd like to share with you, in three

1 or four slides here, what our summary was of that
2 study.
3 I do have copies of this, and I'll ask
4 the question whether I need to provide the
5 Advisory Committee with copies of the full
6 presentation, as well as copies of the report?
7 Would that be an appropriate thing to do now?
8 We're going to docket this, but --
9 COMMISSIONER DOUGLAS: I think it would
10 be very helpful --
11 MR. JACKSON: Phillip, could you, while
12 I'm going through this, pass out the reports.
13 As an overall approach, we tried to
14 identify and explore the quantitative approaches
15 to distributing the AB-118 funding. And the idea
16 here is you could look at many different options
17 from just saying do it by fuel, you could do it by
18 needs of various technologies, be they R&D needs,
19 be they demonstration needs, be they vehicle
20 deployment needs, et cetera.
21 We concluded that the best way of
22 looking at this was to look at it in terms of like
23 technologies, or what we call technology buckets.
24 So we included four technology buckets here:
25 vehicle efficiency improvements; blended biofuels;

nonrenewable alternative fuels; and advanced vehicle technologies.

And these groupings came out, really, of the AB-1007 effort for the alternative fuels plan that the state put together just recently.

And what we mean by vehicle efficiency improvements are everything that can be done relative to improving the efficiency of the engine, improving the efficiency of the transmission, hybridization of the vehicle, making the vehicles lighter, making them more aerodynamic. These would be technologies that would sort of fit into the gasoline/diesel grouping.

And as Mike Walsh pointed out, perhaps maybe these are driven more by regulation, as opposed to incentives. That's something that you guys could figure out when you're putting this together.

Blended biofuels include ethanol, would include blends of ethanol; it would include biodiesel; it would include renewable diesels, all those kind of combinations that would either be used as a neat fuel, E-85, or something that you would blend into the gasoline or diesel fuels.

1 The nonrenewable alternative fuels, as
2 we define them, were the gaseous fuels, LNG and
3 LPG. And then the advanced technology grouping
4 was one that included basically electric drive.
5 Be it a PHEV, be it a battery electric vehicle, or
6 be it hydrogen. The electric drive is the common
7 factor of those technologies.
8 Then we looked at how to possibly screen
9 it, and we said we think that the best way of
10 screening it is on the potential of reducing the
11 greenhouse gas emissions of those technologies,
12 and how well they would decrease the greenhouse
13 gas emissions for both the light- and heavy-duty
14 sectors, compared to the baseline technologies.
15 And then we wanted to bring in the fact
16 that there are issues associated with the fact
17 that in a constrained scenario you've got some of
18 these technologies are already going to be forced
19 through regulations like the low carbon fuel
20 standard. So that doesn't sort of count in terms
21 of getting funding if you're already going to
22 require industry to do that.
23 The constraints also include the fact
24 that there might be supply issues, either from the
25 vehicle or the fuel side. For example, biomass

1 probably can't do a hundred percent of all the
2 needs of the light-duty vehicle sector. It can do
3 a part of it, but it can't do a hundred percent.
4 So there's a constraint that you would have to add
5 to it in terms of GHG score.
6 And we could also then consider the
7 needs of each of the technologies, be it R&D
8 demonstration, vehicle deployment or
9 infrastructure. And infrastructure here we used
10 fairly broadly from production all the way through
11 distributing the fuel at the corner gas stations.
12 And then we made some comments relative
13 to recommendations for scoring projects. And I'll
14 briefly show you that.
15 Next slide, please. This is the results
16 of taking and allocating it based on the GHG
17 reduction potential. We used AB-1007. I agree
18 with the comments that were said earlier that we
19 should be using one GREET methodology, or one
20 methodology for the lifecycle assessment. But
21 just to warn you, this was AB-1007 numbers, which
22 are being -- the lifecycle analysis procedures are
23 being refined.
24 But this is what you get in terms of the
25 constrained numbers. And it would say, of your

1 funding you would allocate 25 percent to improved
2 vehicle efficiency. What do we mean by improved
3 vehicle efficiency. Well, this vision here is the
4 vision that was in the alternative fuels plan,
5 which basically says you have to be 3X better than
6 the baseline. This is 60-mile-per-gallon-type
7 vehicles.
8 It's constrained in the sense that
9 there's already Pavley regulations, or on a
10 national level CAFE regulations that would improve
11 it to a certain extent. It doesn't take you to 3X
12 improvement, but it improves it somewhat.
13 Blended biofuels, we're suggesting
14 something like 16 percent. Again, this gets
15 constrained because of the amount of feedstocks
16 that are available to produce those biofuels.
17 And then on the nonrenewable alternative
18 fuels, this is the natural gas. The constraint
19 here that reduces its funding is primarily the
20 fact that it's constrained into the heavy-duty
21 sector, and there is not much vehicle technology
22 or not much penetration into the light-duty
23 sector. If there was, then this funding level
24 would go up because you'd have more leverage in
25 terms of reducing greenhouse gas emissions.

1 And then finally, the last category is
2 advanced vehicle technologies. And, again, just
3 to emphasize, this is the electric drive type
4 platform which includes batteries, it includes
5 plug-ins, it includes hydrogen-type technologies.
6 And just one other clarification here.
7 We're talking not only onroad, but we're talking
8 offroad applications, with a lot of electric drive
9 offroad applications that could have a significant
10 impact on terms of reducing greenhouse gas
11 emissions.
12 Next slide, please. This slide is more
13 qualitative in nature, but it gives you an idea
14 how you might, or how the needs of the different
15 technology buckets might change. And I'll just go
16 over a couple of examples.
17 The left-hand corner here is vehicle
18 efficiency improvements. The thought here is that
19 because this is gasoline or diesel technology you
20 definitely don't need infrastructure investments.
21 You probably don't need demos because the industry
22 does that. But the industry probably needs to
23 invest in R&D to package and put together all
24 these various technologies. And surely there
25 would be an increased cost of these vehicles, and

1 you might need deployment incentives to get those
2 vehicles into the marketplace.
3 Just an example. What I'm emphasized on
4 the bottom is that there obviously needs to be
5 some sort of gap analysis. Industry, itself, if
6 this was a regulation, would be forced to do that
7 R&D. You wouldn't need to invest money from AB-
8 118 into that sector.
9 On the bottom right-hand side of this
10 chart, you can see the advanced vehicle
11 technologies wherein you may need to invest in
12 each one of these categories, R&D in terms of
13 advanced batteries; infrastructure in terms of
14 maybe getting increased electricity to the port so
15 they could do cold ironing; you obviously need
16 infrastructure relative to the hydrogen side of
17 the technology. You would obviously need, because
18 some of these things are more expensive, some
19 incentives on the deployment side. So it just
20 gives you an idea of the types of needs that are
21 required.
22 Next slide, please. I'd just like to
23 touch a little bit on maybe an evaluation process,
24 and the thinking that you could do behind the
25 evaluation process. And what's shown here on the

1 left-hand side would be the inputs.
2 Now, the Commission presumably is going
3 to get proposals from a lot of different kind of
4 proponents. It could be a component manufacturer
5 that comes to you with a proposal. It could be
6 the fact that you want to look at a broadbased
7 scenario in terms of implementing one of these
8 technologies.
9 The question is, how do you grade that.
10 How do you determine how you would judge the
11 goodness or the badness of any one of these
12 technologies that are widely separated from each
13 other.
14 This is a thought, and we put it up here
15 for the Commission's consideration, but you
16 definitely have evaluation criteria. You would
17 want to ask your proponents what kind of GHG
18 emission reduction you're getting on a system, not
19 just the component, for example.
20 You would obviously want to ask them
21 what their costs are going to be, not only today,
22 but tomorrow. And then you'd obviously want to
23 ask them what they think their penetration may be,
24 and what their costs may change in terms of
25 penetration.

1 And then you could move that into a
2 cost/benefit methodology. And the two important
3 outputs would be the business case. Does this
4 really make sense; is it a viable business to be
5 investing in; are there other investments that are
6 being made by private industry that makes this
7 work.
8 And then finally, of course, the
9 benefits are very important in terms of what you
10 get out of this.
11 Next chart, please. So, in our view, in
12 terms of developing an investment plan, we think
13 that the GHG reductions are the right metric. And
14 we think that you ought to be looking long term to
15 2050 as opposed to short term.
16 We think you should group the
17 technologies into these categories that we've
18 suggested here. We also believe that you need to
19 develop an evaluation methodology to score these
20 proposals.
21 And we realize that this is a tough job
22 in terms of going from component all the way up
23 to, or vehicle deployment or systems approaches.
24 But finally, I think you need to look at
25 a portfolio approach in awarding proposals based

on not only the benefits, but the business case and then also the risk.

There's going to be some things that are going to be high risk, but potentially have a huge payoff in the end. And there's going to be some things, you guys have already talked about this today, that are sort of business-as-usual.

You've got to weigh those things off in terms of what you're doing. And we would hope that the Commission, in putting together this investment plan, would articulate some of those decisionmaking processes.

So that concludes my presentation. Thank you for giving me the time to speak to you.

VICE CHAIRPERSON BOYD: Thanks, Mike. Do the Advisory Committee Members have any questions at this time of Mike?

MS. SHARPLESS: Please.

VICE CHAIRPERSON BOYD: Jan.

MS. SHARPLESS: Were you looking at the 2050 timeframe?

MR. JACKSON: Yes. It's not emphasized, but what we did was to look on the well-to-wheels basis at each one of the pathways and score them based on their potential for reducing greenhouse

gas emissions in the context of sort of the best possible scenarios.

MS. SHARPLESS: So we're talking about 80 percent, from the 1990 baseline?

MR. JACKSON: Talking about 80 percent from the 1990 baseline.

VICE CHAIRPERSON BOYD: Thanks, Mike. I guess, in full disclosure, it should be pointed out that Mr. Jackson and TIAX were the principal contractors to the Energy Commission and ARB in the preparation of the 1007 report, so they had an inside view of the world, which I'm sure helped them with this analysis. But it is interesting; we've been introduced to it.

Next, I've got a lot of blue cards, so Tim Condon of Clean Fuel USA, who says he has an airplane dilemma.

MR. CONDON: I graciously thank you for allowing me just a few moments. I'll be very brief.

Just for background, Clean Fuel USA, we're a company that deals in multiple alternative fuels and infrastructure. Ethanol, ED -- propane, biodiesel, this is our background. We've been in business since 1993.

1 The point I'd like to iterate to the
2 committee is this: Is that when you're trying to
3 make change in the marketplace, when you're trying
4 to bring a solution -- and our primary marketplace
5 that we deal in is a lot of light- and medium-duty
6 fleets, okay. We got a whole lot of, because of
7 the market.
8 But the key is this, is you got to meet
9 their needs. You know, I've heard a lot of
10 comments about commercialization. You've made a
11 lot of comments about cost and sustainability.
12 Well, cost and sustainability is in direct
13 relationship to whether it will be commercialized
14 or not. So, sustainability without cost
15 justification, they go hand in hand.
16 But the other piece is this, time. In
17 business time is money. And businesses have to
18 use these vehicles. And municipalities have to
19 use these type of vehicles.
20 So the issue becomes is we're trying to
21 meet 2050 goals, but, you know what, it's 2008.
22 We've still got to get to 2009, 2010, 2015, 2020
23 and beyond to get to 2050.
24 And so what do people do right now. And
25 I'm just going to use this in a very tangible

1 example. You have school districts in your state
2 right now today having to decide, do I have to buy
3 fuel or can I buy books.
4 So, I think the whole concept of what
5 you're trying to do is amazing. But at the same
6 time I'd like to caution to you that you've got to
7 bring balance to your process. You've got to
8 bring balance in the concept of timing; you've got
9 to bring balance in the concept of safety and
10 health. But you've also got to bring balance in
11 the concept of how sustainable is it.
12 And the gentleman here, I think it was
13 Roland, made the comment -- or excuse me, maybe it
14 was you, Richard, that made the comment about the
15 most successful projects have to have a balanced
16 approach as to how you bring them to market.
17 Vehicle technologies, infrastructure and supply
18 all have to be accounted for, for it to be a
19 successful solution, to be do-able.
20 In the great words of General Patton,
21 "Give me a good plan I can do versus a great plan
22 I can never get to." It's got to be do-able.
23 And I just share that with you with 15
24 years experience in the marketplace dealing with
25 real world solutions. Thank you very much.

1 VICE CHAIRPERSON BOYD: Tom Fulks, Neste
2 Oil.
3 MR. FULKS: Thank you, Commissioners,
4 Advisory Committee Members. My name is Tom Fulks.
5 I'm here today representing Neste Oil. But before
6 I get into that I would like to make a request for
7 future meetings, when it's 110 degrees outside
8 that we can just go casual; that would just help a
9 lot on the greenhouse gas issues, as well, --
10 (Laughter.)
11 MR. FULKS: -- the air conditioning
12 needs. And that explains my attire today. No
13 disrespect intended.
14 I would like to just give you, for the
15 benefit of the record, because many of you already
16 know who Neste Oil is, but for those of you who
17 don't, Neste Oil is a company based in Finland.
18 It is to the European Union the likes of Valero is
19 to the United States. It's not an upstream
20 producer, but it is a refiner. And it is now,
21 established itself as the world's leader in
22 producing renewable diesel fuel, which is the
23 second generation renewable diesel fuel with a
24 technology that's proprietary.
25 It has refiners open in Finland.

1 There's a new one under construction in Porvoo,
2 Finland, right next to the original. They've
3 begun construction on a refinery in Rotterdam and
4 in Singapore. And Neste Oil has an acute interest
5 in coming to California due to all the various
6 leadership roles that California has been playing
7 over the years.
8 I give you that background to explain
9 some of the comments I'm going to be providing. I
10 would like to commend the Clean Fuels speaker for
11 talking about that need to not allow the perfect
12 to interfere with the good.
13 A perfect plan is wonderful to have; a
14 good plan might be better if we can take that good
15 plan and get to the perfect at some point. So,
16 having a 2050 goal is fantastic, we have no issues
17 with that. But in the meantime we need to provide
18 some energy solutions for people today, primarily
19 people who are paying for the programs.
20 And so with that, I've got some comments
21 on the investment plan. To me, primarily
22 everything that has been said to this point by the
23 committee members we have no issues with. It was
24 perfectly fine.
25 But the big issue that I think we have,

this group has, and the Energy Commission has, and the State of California has is the optics issue. And that is how is everyone viewing this process.

And for that reason, because we have so many eyes on us, we would like -- Neste would like to ask for clarity of terms and definitions.

For example, -- I went back and read the transcript of the first Advisory Committee meeting. I apologize for not being here, I was in Houston with Neste Oil on that day.

And in reading the transcript, it struck me how easily and frequently the term biofuels was used. And there didn't appear to be any great effort to distinguish between alcohol-based biofuels and bio-oil-based biofuels.

Alcohol biofuels obviously is a gasoline blend. And bio-oil biofuels is a diesel blend. To me it seems the opportunity the CEC can take advantage of is for the world to clarify some of these issues so that we can overcome this food-versus-fuel and fiber conundrum that we seem to be having globally. Whenever we have media reference to biofuels, corn seems to be the primary culprit. Yet all biofuels are lumped together as a bad player with regard to greenhouse gases and the

1 tortilla famine and everything else.
2 And as far as we're concerned, we would
3 like to see more precise terms used throughout the
4 process of putting together your plan. And that
5 means instead of using a term like biofuel, just
6 make it clear what you're talking about so that we
7 don't continue to have this sort of stew of terms
8 that everybody thinks they know what they're
9 talking about, but, in fact, they really don't.
10 So I'm not going to hammer too much on
11 that, but I would like to use this AB-118 process
12 as the opportunity to, for once and for all,
13 resolve these term issues.
14 And while we're talking about that, I
15 would love to have a more precise definition of an
16 alternative fuel. And more precise definition of
17 an alternative fuel vehicle.
18 There seems to be some common
19 stipulation that we all know what an alternative
20 fuel vehicle is. But do we really? You know,
21 General Motors drives around with their flex-fuel
22 Tahoe. It's a gasoline vehicle, everybody puts
23 gasoline in it. But it's a flex fuel because it
24 can use E-85. Is that an alternative fuel
25 vehicle? Please, decide that.

1 Obviously we have an interest in diesel.
2 Diesel can use bio-oil fuel. Is it diesel vehicle
3 an alternative fuel vehicle? Natural gas,
4 dedicated natural gas. Is natural gas really an
5 alternative fuel? Some people say it is, some
6 people say it's not, because it's a hydrocarbon-
7 based fuel.
8 So, if you could just take the
9 opportunity to define these terms if not for
10 regulatory purposes, just for informational
11 purposes, so that going forward when we have this
12 debate perhaps two years from now at the national
13 level, we can overcome sort of these knowledge
14 barriers that our industry is facing every time we
15 step forward.
16 With regard to the TIAX proposal to
17 focus on electric drive. Again, we have no issues
18 with that, but we do want to see the lifecycle
19 analysis carried through all the way for all
20 technologies, all fuel technologies, all vehicle
21 technologies.
22 For example, lithium ion batteries.
23 That's what we know today. That's what we know
24 about battery technology. That's state of the art
25 today. Lithium is strip-mined. If you take a

1 look at the photos of the strip mines, it's just
2 this giant open pit in Australia, Peru, Russia
3 where you've got enormous environmental
4 consequences of mining for lithium to put in your
5 batteries.
6 Has that been considered in this
7 lifecycle analysis? I haven't seen that
8 referenced anywhere. Most of the lifecycle
9 analysis dealing with battery electrics and
10 electric drive basically stops at the vehicle. Or
11 it stops at the electricity source.
12 But do we have any sort of analysis of
13 the environmental consequences of everything that
14 it takes to produce an electric drive vehicle. We
15 don't know the answer to that, but we would
16 definitely like to see that clarified.
17 Therefore, lifecycle analysis should
18 treat everything with the same level of scrutiny.
19 I think that's what we would like to see, just in
20 fairness.
21 I think it would be very advantageous
22 for the Commission to open up, perhaps, a new
23 category of technology, perhaps under the heading
24 of really cool things we haven't thought of yet.
25 (Laughter.)

1 MR. FULKS: Primarily because when we
2 talk about biofuels, for example, we think we know
3 everything there is to know. We think you can
4 only grow so much feedstock. You can only produce
5 in certain places. That's because we don't know
6 what we don't know yet.
7 For example, Neste, the USDA and
8 sustainable conservation here in California
9 working on a research program to turn selenium
10 tainted soil in the San Joaquin Valley into fuel
11 crop production with nonfood crops, such as
12 castor, mustard, although mustard is a food crop
13 if you want to eat mustard a lot.
14 But the point is this land is not now
15 being used for anything. It was, at one time,
16 used for agricultural purposes, maybe for growing
17 fiber, maybe for growing food, but it's dead
18 basically. You drive the San Joaquin Valley, you
19 see those white salt leaching through the soil.
20 You can't grow anything on that.
21 Well, Neste is just trying to see if you
22 can use that soil for something. And if you can
23 use selenium tainted water that's right now just
24 piling up in the San Joaquin Valley. That's not
25 in anybody's category. That's just really cool

technology we don't know about yet.

So I would like for this Commission and everybody on this Advisory Committee to remain flexible and to please acknowledge that you don't know everything, because none of us can. And we can't limit our thinking to things that we know today because we don't know what's going to be happening tomorrow.

So I would like for the plan to reflect those possibilities, and that, yes, everything has a problem, everything. You're going to have black carbon; you're going to have lithium strip mining; you're going to have environmental consequences.

You know, natural gas, vehicles down in the ports, great, it's wonderful, and there's all sorts of money being poured into natural gas trucks. Have we anticipated, for example, the methane production from those trucks. When they turn off you have to vent the CNG tanks or the LNG tanks, and you get raw methane, untreated, being dumped into the atmosphere. Methane's a greenhouse gas.

So, again, I would just like for this group to be open minded as it moves forward. And to just really anticipate that you're not going to

1 know everything today.
2 Thank you very much.
3 VICE CHAIRPERSON BOYD: Thank you, Tom.
4 I've noted the really cool things category
5 recommendation, in particular. Well, actually, it
6 fits with my own thinking, it fits an email we got
7 from Steven Clark, one of our Advisory Committee
8 Members who was worried about the tables that he
9 saw leaving out, you know, not having that square,
10 leaving out unanticipated technologies. And I
11 think that's a very valid point.
12 Jaimie Levin, AC Transit.
13 MR. LEVIN: Thank you. I'm the Director
14 of Alternative Fuels Policy for AC Transit. And
15 I'm the Manager of our hydrogen fuel cell program.
16 And given my interest in hydrogen, I hope this
17 journey we're on stops at Mars as a way point on
18 its way to the sun.
19 So, with that in mind, and in the
20 interests of time, I have prepared a statement,
21 written statement, that I can leave with you to
22 follow up my comments. And I'd like to try and
23 keep them rather brief.
24 Those of you who know what we've been
25 working on for nearly nine years know that the

1 State of California has probably internationally
2 the most recognized, the most successful hydrogen
3 fuel cell development program applied to urban
4 transit fleets.
5 And largely that has come as a result of
6 a very solid public/private partnership. We've
7 received initial funding through a number of state
8 agencies, the California Energy Commission, the
9 Air Resources Board, and we've leveraged that
10 money. We've leveraged it very effectively with
11 our private partners to the point that we are now
12 able to demonstrate really significant successes
13 in the actual application.
14 We've carried over 200,000 people on
15 zero emission buses just in the last couple of
16 years, serving environmental justice
17 neighborhoods. Being able to operate vehicles
18 with street-level zero emissions for those
19 communities, operate vehicles that are extremely
20 quiet, improving the quality of life.
21 And as a bus rider, as a transit user on
22 a virtually daily basis, I can testify that the
23 experience of riding one of these vehicles in our
24 urban communities is really a complete change and
25 an improvement of the normal experience that

1 people think of public transit and buses, in
2 particular.
3 And I think it has relevance to your
4 objective that's stated in the investment plan, to
5 try and reduce vehicle miles traveled. Trying to
6 get more people on public transit. And the value
7 of an all-electric-drive vehicle in transit cannot
8 be overstated as to what its long-term benefits
9 are.
10 What we've accomplished in the Bay Area,
11 recently, working with the Air Resources Board, is
12 to establish a consortium of five of the largest
13 operators in the Bay Area. And I would like to
14 suggest that de facto this is a center of
15 excellence.
16 So my number one recommendation is that
17 as you consider centers of excellence, widen the
18 definition so that it isn't typically universities
19 and research centers. We are a research center.
20 You can ask our number one participant, private
21 partner participant, United Technologies, who's
22 learning really important information daily from
23 our real-world experience of heavy-duty operation.
24 So, please consider urban transit
25 applications, fleet applications as centers of

1 excellence throughout California.
2 Secondly, I'm sure you all recognize
3 $120 million isn't a lot of money, especially
4 given the journey that we're all on at the
5 present. And so use that money wisely. I think
6 it was said by several members of the committee
7 that it's important to leverage it to get
8 effective returns on investment.
9 And to that extent we see ourselves
10 really at the verge of the tipping point, to
11 launch fuel cell technology in the transportation
12 sector through applications with urban transit
13 fleets.
14 And then thirdly I would make the point,
15 it's not too soon to invest in technology now for
16 2050. You know, I kind of liken it to the analogy
17 that all of us here in this room and in the State
18 of California, and probably on the planet, really,
19 are on a high-speed train with the next stop 2050.
20 And California, the good news is
21 California's the conductor. The bad news is we're
22 at the back of the train. And the national
23 government, which is supposed to be the engineer
24 at the front of the train is nowhere to be found.
25 So, with that I will conclude that

please give our written statement some consideration. Please give urban transit and hydrogen fuel cell technology also a serious consideration.

Thank you very much for your time.

VICE CHAIRPERSON BOYD: Thanks, Jaimie. Stephen Kaffka.

DR. KAFFKA: Hello. Stephen Kaffka, California Biomass Collaborative, UC Davis. I guess I'm finding Energy Commission hearings addictive, to be addictive.

I'd like to make a general comment to Peter, Mike Smith and other staff here that the California Biomass Collaborative may be able to help you with your public solicitation and feedback process.

We have over 500 members on our mailing list that come from a range of different backgrounds, including a number that have businesses practices.

We're having a meeting of our own on the 14th, Monday, to get some feedback on these particular position papers that you've published from, you know, from our membership.

We also have a bioenergy work group, a

1 University of California work group that mostly is
2 interested in feedstock production, and that use
3 it as farm advisors, farmers and others.
4 So we stand ready to help with this
5 process, because it's also consistent with our own
6 interests and how we see our role.
7 I want to mention the idea of
8 sustainability is a very difficult one, and as I
9 said yesterday, I think that the staff has done a
10 good job of trying to grapple with those issues.
11 But, in general, by its very nature, it's a very
12 broad concept. And the nature of sustainability
13 is to include a range of different issues.
14 What you have here is a CO2 reduction
15 policy. So I noticed in one of the slides that
16 you presented that you had a range of objectives
17 for the policy. It may be very difficult to
18 reconcile those other objectives with the CO2
19 policy.
20 My recommendation would be to be very
21 sensitive to the fact that a CO2 policy may, in
22 fact, lead to choices that would be regarded as
23 difficult or unsustainable from another
24 perspective.
25 It's not that you have maybe a lot of

1 latitude in this, but at least I think it's
2 important to be sensitive to the fact that this is
3 a broad concept; that a single criteria for
4 optimization inevitably leads to compromising
5 others that could be considered equally important.
6 In terms of carbon reduction policy,
7 okay, that's a second comment. Okay, the third
8 one. I think it would be very useful to, as John
9 Shears has mentioned earlier, to have some,
10 perhaps use some -- pick a project or two that it
11 could be from agricultural biomass. There are, I
12 think, a couple of them that are probably good
13 candidates, that could be discussed from the
14 perspective of how do the proposed regulations,
15 the investment plan, affect these projects and
16 what are the consequences of it.
17 It may make the whole process about
18 thinking about sustainability, in particular, much
19 less abstract. For example, I think there is a
20 likelihood that sugar cane ethanol may be
21 economically viable in California. It would be
22 very interesting, especially in the Imperial
23 Valley, be an interesting thing to think about.
24 And the project that was mentioned
25 awhile ago that Neste's involved with, others of

1 us in the University of California system are
2 involved with, as well. Which is the attempt to
3 manage salinity in the western San Joaquin Valley
4 by producing biomass with saline drainage water.
5 That's another thing that we might be able to
6 use as a discussion case.
7 And that makes it much less abstract and
8 much more concrete. You can see what the goods,
9 the difficulties and the possibilities are. So
10 I'd be willing to offer help on that, and I think
11 there would be others in our system that would be
12 willing to help guide that process. And as well
13 as business opportunity. Folks with businesses
14 who might be interested in participating.
15 Lastly, I just want to say one thing
16 about LCA, or lifecycle assessment. There's been
17 a lot of running down of poor old corn ethanol
18 today. I think corn ethanol has significant
19 sustainability issues, but perhaps not for the
20 reasons that most people would think about it in
21 this room.
22 I think the indirect land use change
23 issue is perhaps not the reason that it may be
24 unsustainable. I think the more critical ones are
25 the fact that it's a leaky system. That there's

1 pollutants that leave the midwestern ecosystem
2 through the Mississippi River that lead to a
3 nitrification of the Gulf of Mexico. I think
4 that's clearly an issue, and has been an issue for
5 decades, and will continue to be so.
6 I think it's possible to simplistically
7 think that growing an acre of corn in Iowa leads
8 to an acre of, for instance, rain forest clearing
9 in the Amazon. I think we may have grown the risk
10 if we use that simplistic model in terms of
11 indirect land use change of accomplishing exactly
12 the opposite of what we might be able to do with
13 biofuels.
14 I think there's a great opportunity to
15 use biofuel production and related crop production
16 increases to stabilize forest loss. Forest loss
17 is occurring anyway. There's constant burning
18 going on in tropical regions of the world, not
19 because we're growing biofuels for food crops, but
20 because of other reasons.
21 So I think it's important that, perhaps
22 other speakers have noted this, if we create our
23 regulations properly and if we don't miscount
24 indirect land use change carbon costs to perhaps
25 use these for very positive goods. Not just in

1 California, but around the world.
2 There's a longer discussion, and I'm
3 sure we should have it, and we'll have it soon.
4 Thank you.
5 VICE CHAIRPERSON BOYD: Thank you.
6 COMMISSIONER DOUGLAS: I just wanted to
7 make a brief comment, which is that I hope nobody
8 leaves the room thinking that AB-118 sets up a
9 greenhouse gas over everything, and nothing else
10 matters sort of standard.
11 It's one thing to say, as the bill very
12 clearly does, the purpose of the program is to
13 support and help achieve our climate goals, but
14 we've also got very clear direction that we've got
15 to do it in such a way that improves, or at least
16 does not harm, air quality. We've got to do it in
17 such a way that's protective of the state's
18 natural resources and other sustainability
19 concerns. And we're asked to look at a number of
20 factors, as well.
21 So, you know, this really is not a
22 greenhouse gas at the expense of anything else
23 type of approach.
24 VICE CHAIRPERSON BOYD: Rodney Pitts.
25 MR. CASTILLO: I'm actually not Rodney

1 Pitts. I'm Eric Castillo with Go Green Biofuels.
2 And that's Rodney Pitts right there. I'm going to
3 keep this real brief, as well. I know everybody's
4 hungry and needs some natural lighting and
5 ventilation, so --
6 (Laughter.)
7 MR. CASTILLO: -- thanks to the
8 Advisory Committee for the opportunity to provide
9 input on the implementation --
10 VICE CHAIRPERSON BOYD: Smoky out there;
11 it's better in here.
12 (Laughter.)
13 MR. CASTILLO: Go Green Biofuels shares
14 the belief that the production of biofuels from
15 waste is critical in the short term due to the
16 immediate additions to fuel supplies, reduction of
17 greenhouse gases. It's going to give us a greater
18 bang for the buck. And given the energy crisis
19 the state's facing, it should be pursued on the
20 fastest possible track, which kind of echoes
21 pretty much the sentiment with everybody here that
22 there's a sense of urgency to get this up and
23 running as quickly as possible.
24 If you take a look at the maps of the
25 biofuels facilities across the country, they're

1 kind of centrally located in the midwest and
2 whatnot. And California is way behind on the
3 boat. And technologically speaking, I would
4 expect us to be right on the front end of that,
5 and that is not the case.
6 Plants that are greenlighted now can be
7 producing biofuels in nine to 12 months. These
8 therefore serve to alleviate not just long-term
9 unsustainability, but short-term and medium-term
10 adverse economic conditions.
11 We are out of Vallejo. And as you know,
12 Vallejo is in the midst of filing bankruptcy. We
13 have a little bit more of a people-type of
14 perspective with Go Green Biofuels; we're more
15 interested in that than anything else. And look
16 at a regional perspective on things.
17 They are desperate to have some type of
18 influx into their community. And given the
19 proximity to all the other major refineries in
20 that area, I think it would be a huge, huge
21 feather in the cap of northern California for us
22 to have a great biodiesel facility right there on
23 the water. With our waterless technology and
24 whatnot, we have no barriers to being able to be
25 permitted to have a wonderful facility, a state of

1 the art facility right there.
2 Which kind of leads to the comment that
3 I believe Will Coleman had made earlier. My
4 concern in listening to the draft was revolving
5 around the categorization and the selection
6 process. The whole safe-versus-need, versus going
7 into a large investment-type of group who's
8 putting in a massive facility, 100 million gallons
9 and whatnot. Versus those people that have that,
10 again, like I said, more community, regionally
11 oriented, a 10-million gallon facility, things of
12 that nature.
13 That provides a need, and being able to
14 attract the private investment for that, I think,
15 is paramount to this.
16 That being said, again, $120 million is
17 not a whole lot of money. We would really like to
18 see some form of type of loan guarantees that
19 would provide a multiplier effect so that we could
20 really leverage that money for private use in
21 attracting the private investment that we need.
22 Because we just don't have that confidence yet.
23 In addition to that, we think that we're
24 looking at some educational opportunities, as
25 well. Just the awareness. They were talking

about the definition of terms. When you're talking about biofuels, biodiesel, they all get lumped into the category, have a negative stigma associated with all the crops and all the feedstocks. It's not really a sustainable viable solution.

I think we really need to do a good job of educating, on a local level, which we would be doing, as well, providing tours, outreaches for education for the Gen Y and the Gen Z that are coming up, so they'll be able to understand and be very very comfortable with it.

Also the clean energy enterprise zones should be highlighted when a new facility is planned. This will enhance follow-on projects, putting in place incentives and reduce barriers to entry for the full spectrum of clean technology businesses yet to evolve, as he referred to, as the cool things yet to come.

I mean just looking back in the last two years the new technology, the new generation of technology that's come about, it's nothing compared to what you were looking at from the first generation. I mean waterless technology is producing biodiesel, utilizing 99.44 one-

1 hundredths percent of everything that you possibly
2 can that is totally sustainable. It's just
3 amazing.
4 So, I hope you all take that into
5 consideration on your second round of the
6 implementation. Thank you.
7 VICE CHAIRPERSON BOYD: Thank you.
8 Nathalie Hoffman, California Renewable Energy.
9 MS. HOFFMAN: Hi, I'm Nathalie Hoffman;
10 I'm the CEO of California Renewable Energy, which
11 is in the process of developing its first 100
12 million gallon-per-year sugarcane-ethanol
13 distillery in the Imperial Valley. And we will
14 use the sugarcane's biomass to produce all the
15 energy necessary to power the plant. And then we
16 will have about 50 megawatts left over to sell to
17 the grid as renewable electricity that will
18 qualify for the renewable portfolio standard.
19 And I just listened to what Dr. Kaffka
20 said about it. Sugarcane ethanol in California is
21 truly, if we can do this, it will be truly a
22 blessing for this state. And I share the concerns
23 of some of the other speakers about lumping
24 biofuels all together without making distinctions.
25 Sugarcane ethanol is a very different

1 animal from corn ethanol. If you've ever seen a
2 plant, and I'll put one into the record, it has a
3 tremendous amount of green biomass as opposed to
4 corn, which doesn't have biomass. So when you
5 take the sugarcane to the plant to process it,
6 you're taking your power source to make it.
7 And it's very important for a lot of
8 reasons that people have brought up today. This
9 is something that is immediately available. The
10 technology works now. They are producing
11 something like 7 or 8 billion gallons a year in
12 Brazil doing this. It's immediately available.
13 The Energy Commission, when they did
14 their well-to-wheel analyses last year they
15 determined that sugarcane ethanol from Brazil is
16 by far the lowest carbon transportation fuel. And
17 I sent in a comment and said that sugarcane
18 ethanol from Brazil was the lowest carbon and
19 transportation fuel a prior, sugarcane ethanol
20 made right here in California from California
21 feedstocks was going to be a lot lower than that.
22 And even Tim Searchinger has said that
23 sugarcane -- ethanol from sugarcane is great. It
24 reduces greenhouse gases by 85 percent. Actually
25 there's been a superseding study by Dr. Macedo,

who he references. And we here in California, Dr. Macedo, and I have his paper which I will also put into the record -- Dr. Macedo projects a 2020 case, which we'll have right at the beginning here, from Brazil, which will give us an energy balance of 12-to-1.

So, this project has -- this kind of project -- and I'm not the only company doing this, by the way, which I think is good. We're building an industry down there. But this project, this kind of feedstock has the ability to meet both of the goals head-on. It's an amazing greenhouse gas reducer and the project is -- and it's been designed to be totally sustainable.

We're using marginal land on which forage crops are grown. Well, as I said, the technology always -- it's the lowest cost, we talked about cost today. We're using less water than other crops that are on the land right now are using. And those are cattle feed. I mean would we rather be using our precious water resources for cattle feed or to be growing low carbon transportation fuel.

We can get something like 500 million gallons of low carbon transportation fuel from

that area, and close-in other areas. And then clean bioelectricity. We can do that.

I think, as I have read things, I -- well, first of all, in the preamble and some of these other documents I read today, there seem to be conclusions that purpose-grown crops are off the table. And we talk only about waste, the waste, agricultural waste as being something that should be getting financing under AB-118.

And I really don't understand that. And I think it goes back to what other people said, instead of just making a broad category and lumping everybody into it, we should really get -- I don't see anything in the record, I mean it just says in the preamble, that -- one part that's preamble, and then in your plan, Pete, it just says because of this controversy with purpose-grown energy row crops. I don't know what that is. And I don't know what, in other statements, it says that we've found, you know, practices have been found to preempt unforeseen and unanticipated adverse consequences. Could somebody please show me the data for that? I don't see it anywhere.

I, on the other hand, am going to put in something into the record that are actual facts

1 and data about these kind of things. And then if
2 other people have things, let's talk about it.
3 But I do have some data on it.
4 So, basically that's what I want to say.
5 I agree with other people. I agree with John
6 Shears. I, myself, do not think there has been
7 enough transparency in this process if some of
8 these things have been decided, some of these
9 conclusions that I see here, without getting input
10 from stakeholders.
11 I agree with the other business people.
12 We have to take a business view toward this, we're
13 the people that are investing our money in this to
14 make this happen for the people of the state.
15 And I also want to say, as other people
16 have said, it is so very important what we do
17 here, because really the eyes of everybody else
18 are watching us. So, please, let's not make a
19 mistake and just assume things. You know, let's
20 really take a look at what the data is and what
21 the studies say before we just assume we know what
22 the conventional wisdom is about these crops.
23 Thank you.
24 VICE CHAIRPERSON BOYD: Thank you.
25 Catherine Dunwoody, California Fuel Cell

Partnership.

MS. DUNWOODY: Good afternoon, Commissioners and Members of the Advisory Committee. Thank you for the opportunity.

I just want to be very brief and point out that I have submitted to the docket a document that was recently adopted by the members of the California Fuel Cell Partnership as a consensus vision for the rollout of fuel cell vehicles and hydrogen stations over the next few years.

Our purpose in putting together this vision document was to really frame the specific needs for hydrogen in the next few years with an eye towards achieving the 2050 goals of having a significant number of electric drive vehicles, including hydrogen fuel cell vehicles in the mix to provide significant greenhouse gas benefits and others, petroleum reduction and air quality benefits, as well.

What I find is that people often have difficulty understanding how we can get from demonstration programs today to a future commercial market. Either they think that fuel cell vehicles are too far off in the future that we don't really need to do anything now, or they

1 wonder, you know, why can't I have one of these
2 right now because these are such great vehicles.
3 You know, someone's holding back on us; we need to
4 have these immediately.
5 Well, in truth, it's a process. And we
6 need to take a very well thought out approach to
7 bringing this type of technology to market. What
8 we can say for sure right now is we know what the
9 next steps are. We know what we need to do to get
10 from the demonstration programs of today, which
11 have been very successful, to the next phase which
12 is bringing the vehicles to individual users.
13 And you've heard, of course, in many
14 recent media announcements that that's already
15 starting to happen. The Honda Clarity in Los
16 Angeles; GM's Project Driveway; Daimler's made
17 announcements of starting production. As well as
18 has Toyota.
19 So these things are happening, the cars
20 are coming. It's very important for California to
21 take specific steps today to retain our lead in
22 this technology here in the state.
23 Auto companies have a lot of choices
24 about where they can put these cars. A lot of
25 people around the world want them. We need to

1 build the infrastructure here that is the next
2 step, retail-like, easily accessible, customer
3 friendly stations to support the next phase of
4 vehicles.
5 As well, perhaps less well known, but
6 I'm glad that Jaimie Levin has pointed it out,
7 hydrogen transit buses have been very successful
8 in demonstration program. California has a
9 regulation that will require transit agencies to
10 put more and more zero emission buses, including
11 hydrogen fuel cell buses, on the road. And we
12 need hydrogen fuel stations to support those
13 vehicles, as well.
14 We think that there can be some
15 synergies between hydrogen deployed for transit
16 agencies, as well to support the passenger
17 vehicles that the auto companies are deploying.
18 So, I think when we can look at
19 leveraging investments in infrastructure, that's a
20 very important place to look for synergies.
21 I won't go into anything in detail about
22 this document; I'll let you read it for yourself.
23 It's pretty straightforward, reasonably short and
24 hopefully easy to read. This isn't intended to be
25 definitive. What it's really intended to do is to

1 frame the needs, so you have an idea of the order
2 of magnitude of investment that we think is needed
3 to put into hydrogen in the coming years.
4 So, thank you very much.
5 VICE CHAIRPERSON BOYD: Thank you,
6 Catherine.
7 COMMISSIONER DOUGLAS: I'd just like to
8 let people know I've got to step out for a 1:30
9 siting committee meeting, so sorry to miss the
10 last comments. And I'd like to ask the staff to
11 bring the transcript by my office so I can see
12 what the last public commenters say. Thank you.
13 VICE CHAIRPERSON BOYD: Dave Modisette,
14 California Electric Transportation Coalition.
15 MR. MODISETTE: Thank you,
16 Commissioners, Members of the Advisory Committee.
17 I'm Dave Modisette with the California Electric
18 Transportation Coalition.
19 I think most of you know, but maybe some
20 don't, that we're a nonprofit business association
21 of companies in California working on electric
22 transportation technologies and infrastructure.
23 Let me just say, I think this has been a
24 really excellent and productive discussion today.
25 I, you know, agree with virtually all the comments

1 the Members of the Advisory Committee have made.
2 And I have only four additional
3 comments. First of all, I do agree with the
4 program goal that's been articulated by staff,
5 with the 2050 timeframe of greenhouse gas
6 reduction. I can say would incorporate in that
7 the kind of backcasting technology analysis that
8 Tom Cackette talked about, so that we know what we
9 need to do in the next few years in order to reach
10 that goal. Also, as Commissioner Douglas
11 mentioned, or described it, building a bridge to
12 the 2050 goal.
13 Secondly, on the issue that Peter Ward
14 raised about the additional attributes or enhanced
15 attributes of some of these technologies and
16 fuels, yes, I think we would agree that in
17 addition to the greenhouse gas reduction benefits,
18 the other attributes, beneficial attributes of
19 these technologies and fuels does need to be
20 incorporated into the analysis. And priority
21 needs to be given to those technologies and fuels
22 which do provide the best combination of those
23 attributes.
24 Thirdly, we would encourage the Advisory
25 Committee to consider different types of financial

1 incentives, beyond the traditional grants and RFP-
2 type processes that I think most people think of.
3 For example, we've recommended to staff
4 that at least for some types of electric
5 transportation technologies, where you do have a
6 higher incremental cost than a conventional
7 gasoline technology, but in those situations where
8 that incremental cost is paid back over the life
9 of the technology in lower fuel cost savings, that
10 maybe a grant is not the most cost effective way
11 to provide an incentive for that kind of a
12 technology. Maybe it's a loan guarantee program,
13 or a low-interest loan program.
14 And so that has been our recommendation
15 to staff for those types of technologies where you
16 do have high incremental cost, but back to the
17 consumers over time.
18 Incidentally, that's exactly the process
19 that the ARB is going to use for their first year
20 of AB-118 funding. And they've partnered with the
21 Treasurer's Office with an existing structure to
22 provide loan guarantees and low-interest loans
23 called California Capital, the so-called CALCAP
24 program, in conjunction with the California
25 Pollution Control Financing Authority.

1 So, I think it would be a good approach
2 for the Energy Commission to build on, on those
3 existing structures within the Treasurer's Office,
4 and provide those kinds of loan guarantees and
5 low-interest loans.
6 Then lastly, you know, we've been asked,
7 as industry, we've been asked for many many months
8 now by the Energy Commission Staff to tell the
9 staff what the industry priorities are for funding
10 in electric transportation.
11 And so at the end of June we did provide
12 a list of those priorities to the Energy
13 Commission Staff. It's not a very long list. You
14 can see it's just two pages. And that if this
15 would be something that would help the Advisory
16 Committee or inform the Advisory Committee, so
17 that you know at least what our segment of the
18 industry believes are the funding priorities, we'd
19 be happy to provide that to you.
20 Thank you very much.
21 VICE CHAIRPERSON BOYD: Thank you. If I
22 was in your shoes I would provide it to the
23 Advisory Committee.
24 (Laughter.)
25 VICE CHAIRPERSON BOYD: Mike Stephenson.

1 MR. STEPHENSON: Good afternoon, and,
2 again, thank you, the Commission as well as the
3 Advisory Committee.
4 My company, IVC Systems, is a small
5 company and we developed a new technology to
6 improve the efficiency of the internal combustion
7 engine.
8 I'm here to state the thought that I
9 think, you know, as you look at the plan of what
10 to invest in, I think engine efficiency technology
11 is something that should still be considered, or
12 should be part of that bucket, as it were.
13 I can tell you that, you know, we have
14 this great technology and we've tried to introduce
15 it in industry. There's a real hesitancy for
16 companies to try outside technology. And nobody
17 basically wants to stick their neck out.
18 So I think it's important to have some
19 funds set aside to fund new technology from a
20 small company so that you can build, leverage that
21 investment with universities and other
22 organizations in terms of raising investment. So
23 don't overlook internal combustion engine
24 technologies, because you can't really regulate --
25 you can regulate efficiency, but you still have to

have a method in order to make engines run more efficiently. And so just as you consider that, I would -- so that's what I think.

VICE CHAIRPERSON BOYD: Thank you.

MR. STEPHENSON: Thank you.

VICE CHAIRPERSON BOYD: I don't think we're forgetting you.

Joe Chaperena, hope I didn't butcher that too bad. Chaperena.

MR. CHAPERENA: Chaperena.

VICE CHAIRPERSON BOYD: I got close.

MR. CHAPERENA: That's pretty close. That's as close as it gets normally, so --

(Laughter.)

MR. CHAPERENA: -- first of all, thank you for allowing me to make a comment here today. I'm with Sustainable Conservation. And my comment is going to be even briefer, because a couple of my project partners already came up and spoke; that being Steve Kaffka and also Tom with Neste.

One thing that I wanted to state today was just a reiteration of what we've heard today of not lumping biofuel crops with midwestern corn-based models, as well as soy-based models, and other models which I am very skeptical of, as well

as many other people are for very good reason.

Since a couple of our other projects were already discussed, I'll just state one other one. We work with various different types of waste-to-energy projects, and waste-to-fuels projects and biofuel crop projects.

One of these projects that I'm currently working on is with a few farmers up in the Yuba City area, and an entrepreneur who is actually there funding the project out of their own pocket. They have 70 acres of sweet sorghum planted that has the initial readings of the sugar contents greatly exceed sugarcane.

We're looking at extracting the juice in the field and taking that to ethanol plants which would complete a very energy-intensive step in the process of distillation. It's very promising, and we're personally -- we're a nonprofit organization, and we're allocating some of our general funds to make sure that we get good science taken from both the biomass material, as well as the juice that's being pulled off of this crop. And making sure that we have a good, while we have this crop, and while we harvest this crop, that we have as solid of science, hard data

1 possible.

2 And I just wanted to reiterate that if

3 you see a project, or when you see projects that

4 are, you know, biofuel crops, to not lump that

5 into the sum of the midwestern corn-based and

6 soybean-based models.

7 And we're working with various

8 researchers and farmers and private businesses and

9 government representatives and regulators on

10 developing a California-based biofuels model.

11 So, that's all I have to say. Thank you

12 very much.

13 VICE CHAIRPERSON BOYD: Thank you. Does

14 that go under the category of really cool things?

15 MR. CHAPERENA: Yes.

16 (Laughter.)

17 VICE CHAIRPERSON BOYD: All right, Bill

18 Bunnell.

19 MR. BUNNELL: My name's Bill Bunnell,

20 and I run a gasoline station down in Fresno. And

21 I had a couple comments.

22 I think what you guys are trying to do

23 here is create somewhat of an entrepreneurial

24 little sub-sect within the government, because the

25 functionality of our government hasn't been

1 getting anything -- or hasn't been getting much
2 accomplished on its own. And I think that's why
3 this program came about in the first place.
4 And my ideas are this: Is looking at
5 the informational packets that you guys assembled
6 this, we have five different categories there.
7 Infrastructure, it does not have anything
8 dedicated to it in the first years. We already
9 have several biofuels out there that would make
10 things better today, but if we don't put funding
11 towards the infrastructure, you can have the
12 greatest idea in the world, but can't get into the
13 customer's vehicle, it's not going to make a
14 difference.
15 So, I question why infrastructure and
16 workforce would be excluded from those first years
17 of funding.
18 Then secondarily, I have a question why
19 even have those categories in the first place. If
20 what you guys are trying to do is be
21 entrepreneurial and try something different and
22 try new ideas, why would you guys want to put
23 these categories down in the first place.
24 What I'd suggest is you have the best
25 ideas drive your funding decisions. And if the

1 best ideas all happen to fall into one category,
2 then that's where your funding should go.
3 And also bear in mind that, and I think
4 a few other speakers have already said it, is who
5 knows what those best ideas are going to be.
6 And I think the Commission ought to have
7 the latitude to try some new things, bearing in
8 mind that you might have a few colossal failures,
9 but you don't hit a homerun every single time.
10 And if you don't sometimes swing for the fences,
11 you're definitely not going to.
12 I can tell you from my experience -- I'm
13 the head of the finance committee for my son's
14 school district, which is a volunteer kind of
15 position -- we have all kinds of problems right
16 now where we're laying off teachers that we want
17 to keep, and we have funding to keep, but the
18 funding has so many strings attached to it, that
19 we can't do what is the right thing for the kids
20 in the school district. Because all the funding
21 that comes from Sacramento has so many rules and
22 so many dictates tied to them, that we'd be
23 breaking the law to do that.
24 And I would like to hopefully see that
25 if you're going to create these categories, if you

1 have to have all these rules and regulations and
2 mandates that at least you have some pressure
3 valves, some release points that allow, like the
4 guy that came up here and said cool new ideas. Or
5 whatever you want to call it.
6 But if you think you've got to have all
7 this structure, I would hope that you would at
8 least provide some flexibility, whether it's 5
9 percent of the funding or 2 percent of the
10 funding. Because who knows what's going to come
11 down the road. And here you guys locked
12 yourselves into four years of how you plan on
13 spending money that you don't know what's going to
14 happen two years, three years from now.
15 You may not know what's going to happen
16 six months, nine months from now because the field
17 is advancing so rapidly.
18 The second point I'd like to make is I
19 think the energy department already has the best
20 interests of -- and it's good to have everybody
21 come here with all your own input, but each one of
22 you has your own specialty and your own desire to
23 get what it is you want accomplished.
24 And I think they have to keep in mind
25 that we need to have a balance of all these

1 things. And so sometimes in fighting for the one
2 thing it is that we want, we've got to keep in
3 mind, you know, what they're going to be doing,
4 and the overall goals that they want to achieve.
5 It may not be what I want to do, or what any one
6 of you on this committee wants to do. And I think
7 that has to be kept in mind.
8 And then the last thing I'd say is I
9 started ARCO's fleet fueling department when I was
10 28 years old. And I can tell you how much things
11 were held back with having to document and the
12 process involved. We spent more of our time
13 trying to tell people what it is we were doing
14 than actually getting out there and doing it.
15 And I'd hate to see the energy
16 department and/or CARB be spinning their wheels
17 spending most of their time trying to show us
18 everything they're doing, rather than getting out
19 there and doing it, and making it happen.
20 So, those were my comments.
21 VICE CHAIRPERSON BOYD: Thank you. And
22 hopefully from some of what you heard today, you
23 know that some of your concerns are being
24 addressed, and others, I think, we'll take into
25 account.

1 I have a virtual blue card from Tim
2 Carmichael. here.
3 MR. CARMICHAEL: Thank you, Commissioner
4 Boyd. I just wanted to mention a couple things
5 that didn't come up today. The draft investment
6 plan talks about this version being a one- or two-
7 year -- the initial one or two years.
8 It doesn't get into what the process
9 will be for updates, or performance reviews. And
10 I think it's important for the next draft, and
11 certainly the final, to speak to that, knowing
12 that it might change.
13 And I think a committee could be part of
14 that solution, but I don't think it has to be this
15 committee. There are obviously a variety of ways
16 it could be done. But I do think it's essential
17 that there's some public input component to that.
18 The second thing is I've picked up in my
19 years of working with different government
20 agencies, not just the CEC, but virtually all of
21 them, resistance to picking winners. And it's
22 kind of ironic because really what we want to all
23 do is to pick the right winners.
24 But the sense is if any agency tries to
25 pick winners with an investment plan, they're

1 going to somehow exclude or limit the, you know,
2 the potential for other prospects.
3 I want to just touch on that to say that
4 we want to set up a template that gives us great
5 chances of picking strong or very real prospects,
6 knowing that not all of them are going to work
7 out.
8 And so we're investing a majority of the
9 money in strong prospects, but also allocating
10 some funding to what some would term as long-
11 shots. Because, you know, some of the things that
12 I think we've all heard about today, and come up
13 in our day jobs, might be long shots for 2010, but
14 really good prospects for 2050.
15 I think I mentioned this at the last
16 meeting, but just to be safe, one of the hot
17 topics at the Air Board, if you attended any of
18 the recent Air Resources Board board meetings, is
19 the need to try to recycle public money.
20 And what they mean by that and what I
21 mean by that is where there are opportunities to
22 give money and get it back, or get some of it back
23 and re-use it over time, and keep investing it
24 through a loan program or otherwise, I think is a
25 really important element that should be considered

as part of this investment plan.

And then finally, I think Tom Cackette covered this, and I want to emphasize, you know, for all the focus on -- I'm one of those that believes that we need to keep an eye on 2050. But there's a lot to be done before then.

And I find it intriguing that 2050 is 42 years from 2008, it happens to be how old I am. So, go back 42 years to 1966. And how many of us can imagine being in 1966 and having a good read on where we were going to be in 2008.

And I share that just, you know, to emphasize the point that yes, 2050 is one of our goals. But I really feel we need to be doing as much as we can over the next decade. And, in fact, most of this money is going to be spent, even with the recycling program, I think most of this money is going to be spent in seven or eight years. So what can we really accomplish in the next ten years.

That's it. Thank you for the opportunity to add a few thoughts.

VICE CHAIRPERSON BOYD: Well, I'd give equal time to my other remaining Advisory Committee Members, if anybody else has comments

they'd like to make based on what they've heard today, or any concluding comments? John.

MR. SHEARS: Yeah, just as someone who was involved in, you know, the negotiations over the bill. I just wanted to mention in response to the first commenter from Clean Fuels USA, that we're all very aware of exactly the points that he raised. And that was, you know, very much discussed when the bill was being drafted. And we're all very cognizant of those issues within this process.

So, just wanted to let people know that we are very much aware of those challenges. And that we make sure that we don't trip anything up.

VICE CHAIRPERSON BOYD: Anyone else? I'm going to comment right here that -- based on both what you just said, John, and what Tim said, and what Karen said a little earlier, as efforts to try to level the playing field where some people felt it might not be level, I'm just reflecting back on where were you in 1966 -- anyway, I won't answer that.

(Laughter.)

VICE CHAIRPERSON BOYD: But, I was just thinking, there wouldn't have been an AB-118 if it

1 weren't for the CalSTEP report. And I see John
2 sitting there and CALSTART facilitated that. And
3 there wouldn't have -- wouldn't have had any to
4 grab onto to use as a basis.
5 There wouldn't have been a CalSTEP
6 report if it weren't for AB-2076 report, which is
7 the 2003 report by our two agencies that Tom and I
8 both worked on. Which was the call that we've got
9 to reduce our dependency on petroleum. And we do
10 need to introduce alternative fuels.
11 So that's been trumped somewhat by
12 greenhouse gas emissions and what-have-you, and I
13 think that's why Peter pointed out there's a whole
14 bunch of goals out there that we're all trying to
15 keep in mind at the same time.
16 And there's no question we're going to
17 be looking to 2050 because our two agencies
18 embraced it in the 1007 report; and AB-118, among
19 its many reasons was passed to help finance and
20 facilitate carrying out the 1007 report.
21 But you heard a lot of interesting
22 things today, and I really appreciate Tim saying
23 there's short-term stuff, and then there's long-
24 term stuff. And the comments about, you know,
25 don't -- well, I've got that phrase wrong, but

1 anyway, don't have a plan that strives for the
2 perfect and forgets the best in the meantime.
3 So, we have to mesh all of this together
4 into what's best for the nation-state of
5 California to do, in my view, anyway. Since I was
6 around doing this kind of stuff in 1966, also.
7 So, anyway. Any other comments?
8 MS. HOLMES-GEN: Yea, I'd just like to
9 know what is the process going to be moving
10 forward. I mean you outlined the ideas you
11 have --
12 VICE CHAIRPERSON BOYD: Well, I think we
13 do this on our, you know, we do this on our feet,
14 and I think Karen and I said earlier that we
15 thought the best next thing to do would be to have
16 the staff take into account everything they heard
17 today and produce a straw proposal with a lot more
18 straw in it than you've seen to date.
19 Provide it to the Members of the
20 Advisory Committee, but in so doing will also put
21 it on our website so the public can look at it.
22 Ask you for some written input.
23 It was mentioned the WebEx concept, you
24 know, we can have virtual meetings; we don't have
25 to have face-to-face meetings. We might want to

1 introduce that to this process.
2 And before we again have a face-to-face
3 meeting, it is very hard to get us all standing
4 still at the same time, to have these kinds of
5 meetings. So, other things that we can do to
6 facilitate your calendars, such as conference
7 calls or WebEx, may be something we want to
8 seriously consider.
9 It's pretty obvious we're going to have
10 to have more discussions than first envisioned,
11 that you could get away with three meetings and
12 that's the end of it.
13 That's as much process, Bonnie, as I can
14 think of at the moment.
15 Mike.
16 MR. WALSH: You're not suggesting,
17 though, that the September meeting will not take
18 place? This is prior to the meeting --
19 VICE CHAIRPERSON BOYD: Yeah.
20 MR. WALSH: -- in preparation for a
21 dialogue in between, but --
22 VICE CHAIRPERSON BOYD: Yeah, we're
23 not --
24 MR. WALSH: -- we're keeping that on the
25 calendar --

1 VICE CHAIRPERSON BOYD: I think that's a
2 good point. We're not going to let go of our
3 October goal if we can help it, just to keep our,
4 you know, noses to the grindstone, so to speak.
5 And therefore I think the September date still
6 stands and so on and so forth.
7 But we have an awful lot to do in the
8 interim any way we can do it, using any kinds of
9 technology that can help us do it.
10 MR. SWEENEY: I'd like to interject here
11 a moment. This is Jim Sweeney. About the WebEx.
12 I was planning on being at the meeting in person,
13 and then just I got overwhelmed and I couldn't.
14 I've been amazed at how well this works.
15 I'm sitting here, I have access to all the
16 presentations, but I have an advantage over you.
17 I can flip back and forth over all of the slides
18 of any of the presentations when I want to. And
19 that works well. I've heard the conversation.
20 And it's very effective.
21 So, I would really reinforce the idea
22 that creating some extra meetings and doing it
23 using this WebEx can really very effectively use
24 our time, because it works better than I thought
25 it was going to work. It works quite good --

1 quite well.

2 VICE CHAIRPERSON BOYD: Thanks, Jim;

3 glad to hear that.

4 Tom, did I see you flinching?

5 MR. CACKETTE: I didn't want to end on a

6 disagreeing note, because what are we going to do

7 next. But I do want to comment that I think Jim's

8 comment, and I saw you pick up on it, that

9 basically says, let's be careful not to focus only

10 on the long term, because we might be missing

11 short-term opportunities.

12 I don't think that's what I said, and I

13 think it's wrong. I think that the long-term

14 challenges that we have, things like 2050 type

15 goals, are so daunting, so difficult, so

16 transformational that we will fail if we don't act

17 right now.

18 So the point on those goals is that we

19 do have to take actions today to make sure that we

20 are on the right path for there. And if we divert

21 our monies and our efforts too much towards doing

22 things that might have gratifying impacts today,

23 but as some of these charts show, don't have any

24 promise for solving the long-term goals, then

25 we've really missed the opportunity. And we've

1 destined ourselves to fail for the long-term
2 goals.
3 So I don't think there's any of these
4 goals that says that you can kind of just, well,
5 if we only focus on those we'll be twittering
6 around doing something for ten years, and missing
7 other opportunities. If we don't have our feet to
8 the ground and running fast, then those goals will
9 be not able to be met.
10 So, I don't see this choice of early
11 versus long. It's do it all and do it now.
12 VICE CHAIRPERSON BOYD: Well, I don't
13 think in what I said I was disagreeing with the
14 idea of reaching for the future. I guess I am
15 disagreeing that -- well, I'm agreeing, actually,
16 what you closed on, do it all, do it now.
17 I guess in that concept it's let us not,
18 while we need to make sure we don't fail over the
19 long haul, let us not accidentally not look at
20 some near-term things that are helpful, as well.
21 So, we'll have to thrash that out. I'm
22 older than you --
23 (Laughter.)
24 VICE CHAIRPERSON BOYD: I've been there
25 and done that too many times.

1 Any other comments? I know there's some
2 people out there on the phone who'd probably like
3 to participate. We've lost most of the Advisory
4 Committee, or many Members of the Advisory
5 Committee. And I would just recommend, you folks
6 who are not being offered a chance, to submit
7 something in writing, please, with your thoughts
8 and comments to the staff.
9 Yes, Bonnie.
10 MS. HOLMES-GEN: Just quickly. I just
11 want to say that in line with Tom's comments and
12 what I said earlier, I would really like to see in
13 this next draft a clear roadmap as to how the
14 proposed expenditure of the categories and the
15 split of the funds, how that will get us to the
16 2050 goals and the rationale that was used to
17 determine that, in terms of, you know, backing of,
18 okay, how many vehicles we're trying to get on the
19 road, what percentage of these different
20 technologies are we trying to get into our fuel
21 mix. And how does this funding relate to getting
22 us to those goals.
23 So I would really appreciate that level
24 of specificity.
25 VICE CHAIRPERSON BOYD: I would, too,

1 but your -- that's a very tall order. In any
2 event, I'm not saying won't do it, we'll see what
3 can be done the next iteration.
4 All right, thank you, everybody.
5 Appreciate your time and patience.
6 (Whereupon, at 1:55 p.m., the Advisory
7 Committee Meeting was adjourned.)
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CERTIFICATE OF REPORTER

I, PETER PETTY, an Electronic Reporter, do hereby certify that I am a disinterested person herein; that I recorded the foregoing California Energy Commission Advisory Committee Meeting; 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 meeting, nor in any way interested in outcome of said meeting.

IN WITNESS WHEREOF, I have hereunto set my hand this 14th day of July, 2008.