

ADVISORY COMMITTEE MEETING
BEFORE THE
CALIFORNIA ENERGY COMMISSION

In the Matter of:)

Implementation of Alternative and)
Renewable Fuel and Vehicle)
Technology Program)
_____)

Docket No.
08-ALT-1

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

MONDAY, MAY 19, 2008

9:12 A.M.

ORIGINAL

Reported by:
Peter Petty
Contract No. 150-07-001

DOCKET	
08-ALT-1	
DATE	MAY 19 2008
RECD.	JUN 02 2008

CALIFORNIA ENERGY COMMISSION

James D. Boyd, Vice Chairperson
Presiding Member Transportation Committee

Karen Douglas, Commissioner
Associate Member Transportation Committee

CEC STAFF PRESENT

Mike Smith

Debbie Jones

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 (via teleconference)
Union of Concerned Scientists

Tom Frantz
Associate of Irritated Residents

Elisa Odabashian
Consumers Union

ADVISORY COMMITTEE PRESENT

Jim Sweeney
Precourt Institute for Energy Efficiency

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

Carla Din (via teleconference)
Apollo Alliance

Stephen Clarke
Applied Intellectual Capital

Will Coleman (via teleconference)
Mohr Davidow Ventures

Jay McKeenan
California Independent Oil Marketers Association

Tom Cackette
California Air Resources Board
California Environmental Protection Agency

Karnig Kazarian
Business Transportation and Housing Agency

Anthony Brunello, representing Mike Chrisman
Resources Agency

Richard Shedd, representing Will Semmes
Department of General Services

Jananne Sharpless
Public-at-Large

ALSO PRESENT

John Boesel, President and CEO
WestStart-CALSTART

Jameel Alsalam

Colby Morrow
Southern California Gas Company
San Diego Gas and Electric

ALSO PRESENT

Howard R. Ross, President
Ross Transportation Technology, LLC

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

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

I N D E X

	Page
Proceedings	1
Opening Remarks	1
Vice Chairperson Boyd	3
Commissioner Douglas	4
Introductions	5
Background/Overview	10
AB-118 Program Overview	23
Committee Roles and Responsibilities	93
Committee Discussion: Funding Sources and Priorities	93
Committee Members Comments	97
Public Comment	138
Future Meeting Dates and Locations	161
Closing Comments	168
Adjournment	168
Reporter's Certificate	169

P R O C E E D I N G S

9:12 a.m.

VICE CHAIRPERSON BOYD: We've waited the customary ten minutes for the professor. I've never forgotten my college training, and Professor Sweeney just made it. But he had a long way to come to drive from Palo Alto, so I appreciate the fact that he made it within his allotted ten minutes.

Good morning. Welcome to members of our Advisory Committee, and welcome to members of the audience. I'm going to say a couple of words and then turn it over to Mike Smith to just do some housekeeping things like what to do in case of fire and so on and so forth. Then take it back and finish.

I'm Jim Boyd, Vice Chair of the Energy Commission and Chair of the Transportation Committee which deals with transportation fuels. On my immediate right is Karen Douglas, who happens to be the newest member of Commission, but lucky for me she sits on the Transportation Committee with me.

And we are, as you saw from the notice, the Commissioners charged with the responsibility

1 to oversee transportation fuels and technology in
2 general, and in particular oversee and participate
3 in and watch closely and learn from the activities
4 of this Advisory Committee.

5 Mike, would you please take care of the
6 housekeeping chores. And then I'll take it back,
7 if you don't mind.

8 MR. SMITH: Thank you, Commissioner.
9 Just a few housekeeping items before we begin.
10 For those of you who are not familiar with this
11 building the closest restrooms are located just
12 out the side of the main entrance here of the
13 hearing room and to the left.

14 There's a snack bar up on the second
15 floor; so just go up the stairs and it's straight
16 ahead or diagonally across the atrium.

17 Lastly, in the event of an emergency and
18 the building has to be evacuated, please follow
19 our employees to the appropriate exits. They will
20 be the people wearing yellow hats, yellow
21 hardhats. If the building has to be evacuated
22 we'll reconvene over across the intersection in
23 Roosevelt Park. And please proceed calmly and
24 quickly, again following the employees with the
25 yellow hardhats.

1 The only other thing I want to mention
2 is the proceedings here, the meeting today, is
3 being recorded. We hope to have the audio
4 transcripts posted on our website either today or
5 tomorrow. We will have transcripts of the
6 proceeding of this meeting, but that will probably
7 take at least a week or two, perhaps longer.

8 And the presentation that I will be
9 giving after the Commissioners make their opening
10 remarks also will be posted on our website; it may
11 be posted right now.

12 With that I'll turn it back over to you,
13 Commissioner.

14 VICE CHAIRPERSON BOYD: Thank you.
15 Again, I want to thank, in particular, the members
16 of the Advisory Committee. This is the first
17 meeting of this group. And as many, if not all,
18 of you know, it was quite a chore creating an
19 advisory committee, particularly within government
20 with all of its rules, regulations, requirements
21 and what-have-you.

22 So some of you made sacrifices to
23 actually participate in this group. And there's
24 some people who could not make sacrifices that we
25 would have liked to have had on the group, but we

1 have some pretty high hurdles with respect to
2 perceived conflict of interest, let me put it that
3 way. And that made it difficult for some, and
4 impossible for some others. So those of you who
5 are here are very much appreciated.

6 I think I'll ask Commissioner Douglas if
7 she'd like to say anything by way of opening. Then
8 I'm going to go around and ask each of you to
9 introduce yourselves and who you're representing
10 today.

11 Then before turning it over to staff for
12 the second agenda item, the program overview, in
13 the course of, by way of introduction as the most
14 senior Commissioner here, and the most senior
15 person practically here, I'm going to give a
16 little bit of a history, because there's a long
17 history behind where we are today. And then turn
18 it over to staff.

19 Commissioner Douglas.

20 COMMISSIONER DOUGLAS: Good morning,
21 everybody. I just wanted to say briefly first of
22 all, echo Commissioner Boyd in expressing
23 appreciation to the members of the Advisory
24 Committee.

25 We hope to benefit quite a lot from your

1 perspectives and ideas. And also to the people
2 who are participating in this meeting in the
3 audience or on the web.

4 This is a very important moment for the
5 State of California to get to launch this program.
6 It's a tremendously important moment in time for
7 California and the world, frankly, in terms of
8 developing clean alternative fuels vehicles. So,
9 we're very excited to be here today and look
10 forward to hearing from all of you.

11 VICE CHAIRPERSON BOYD: Excuse me, my
12 voice is a little froggy this morning. I don't
13 know if it's just spring fever or the long cold
14 I've been getting over for weeks now.

15 It would be appropriate to have
16 introductions of the Advisory Committee. And as
17 you know, the role of the Advisory Committee is to
18 help us create an investment plan for the
19 alternative renewable fuels and vehicle technology
20 program. And that's what you are an Advisory
21 Committee for.

22 So, Tim, would you like to start and
23 we'll just go around the room.

24 MR. CARMICHAEL: Good morning,
25 Commissioner Boyd and Commissioner Douglas. It's

1 a pleasure to be here; appreciate the invitation
2 to participate. I'm looking forward to the
3 discussion. I'm Tim Carmichael with the Coalition
4 for Clean Air.

5 MR. HWANG: Roland Hwang, Vehicles
6 Policy Director for the Natural Resources Defense
7 Council.

8 MR. SHEARS: John Shears, Research
9 Coordinator for the Center for Energy Efficiency
10 and Renewable Technologies.

11 MR. FRANTZ: Tom Frantz from Kern
12 County. I'm a school teacher/farmer, and head of
13 the Association of Irrigated Residents.

14 MR. CLARKE: I'm Steve Clarke; I'm the
15 CEO of Applied Intellectual Capital. We are an
16 industrial research lab that's publicly traded
17 with offices in the U.S. and the U.K.

18 DR. SWEENEY: I'm Jim Sweeney, Professor
19 at Stanford University, and Director of the
20 Precourt Institute for Energy Efficiency.

21 MR. McKEENAN: Jay McKeenan, California
22 Independent Oil Marketers Association. We're
23 little oil; we represent the fuel distributors and
24 retailers in the state.

25 MR. CACKETTE: Tom Cackette, Chief

1 Deputy of the California Air Resources Board.

2 MR. KAZARIAN: Karnig Kazarian,
3 Assistant Secretary for Economic Development of
4 the Business, Transportation and Housing Agency.

5 VICE CHAIRPERSON BOYD: I think you need
6 to press the --

7 COMMISSIONER DOUGLAS: Press the little
8 button below it.

9 VICE CHAIRPERSON BOYD: Where it says
10 push.

11 MS. ODABASHIAN: Elisa Odabashian; I'm
12 the Director of the West Coast Office of Consumers
13 Union, which publishes "Consumer Reports
14 Magazine."

15 MR. BRUNELLO: Hi, I'm not Mike
16 Chrisman. My name's Tony Brunello; I'm the Deputy
17 Secretary for Climate Change and Energy,
18 representing the Secretary, who will be here in
19 just a little bit. Thanks.

20 MR. EMMETT: I'm Daniel Emmett with
21 Energy Independence Now. Thanks.

22 MR. WALSH: Good morning, I'm Michael
23 Walsh; I'm a consultant on vehicle pollution and
24 Board Chairman of the International Council on
25 Clean Transportation.

1 MS. SHARPLESS: I'm Jan Sharpless, and I
2 noted in the book that I'm labeled as public-at-
3 large. So, --

4 (Laughter.)

5 MS. SHARPLESS: -- I guess I have the
6 weight of the world on my shoulders. But for full
7 disclosure I should tell you that I have served in
8 this august organization several years ago. Was
9 also Chair of the California Air Resources Board.
10 Served as a Chair of Public Health Effects Task
11 Force; on the Advisory Committee for Institute of
12 Transportation Studies. Do consulting and also
13 serve as a Board Member of the Western Electricity
14 Coordinating Council, just to top it off.

15 MS. HOLMES-GEN: I'm Bonnie Holmes-Gen,
16 Senior Policy Director with the American Lung
17 Association of California. I'm also pleased to be
18 part of this important effort.

19 MR. SHEDD: Thank you. My name is Rick
20 Shedd; I'm the Acting Chief of Fleet
21 Administration, filling in for Will Semmes from
22 the Department of General Services.

23 MR. COOPER: Good morning. My name is
24 Peter Cooper; I'm with the Work Force, an economic
25 development program at the California Labor

1 Federation.

2 VICE CHAIRPERSON BOYD: Thank you,
3 everybody in the room. Are there any Advisory
4 Committee members on the phone? I had a note this
5 morning that Pat Monahan, who felt like she was
6 coming down with the flu, was perhaps going to
7 participate by phone.

8 MS. MONAHAN: Yeah, and actually I'm on
9 the recovery, but thank you.

10 VICE CHAIRPERSON BOYD: You're on the
11 recovery. Would you like to introduce yourself,
12 Pat? I only did a half a job.

13 MS. MONAHAN: Oh, I'm the Clean Vehicles
14 Deputy Director, and the Director of the
15 California Office of the Union of Concerned
16 Scientists. I'm very pleased to be participating
17 on the Committee.

18 VICE CHAIRPERSON BOYD: Thank you.

19 MR. KAMMEN: And Dan Kammen, can you
20 hear me?

21 VICE CHAIRPERSON BOYD: Can, Dan, yes.

22 MR. KAMMEN: So, Dan Kammen, University
23 of California at Berkeley; Director of the
24 Berkeley Institute of the Environment.

25 VICE CHAIRPERSON BOYD: I think that

1 covers about everybody. Thank you, all, again for
2 being here. I know it's a great personal
3 sacrifice and we really do appreciate your
4 participation. And maybe the importance of that
5 will be driven home a little more as we go through
6 the day.

7 There are quite a number of people I
8 understand tuned in on the phone or on the
9 webcast.

10 Ah, I'm informed -- Carla, are you out
11 there? I understand another Advisory Committee
12 member --

13 MS. DIN: I already introduced myself,
14 but I was not heard?

15 VICE CHAIRPERSON BOYD: No.

16 MS. DIN: I'm sorry. This is Carla Din,
17 Western Regional Director of the Apollo Alliance.

18 VICE CHAIRPERSON BOYD: Thank you,
19 Carla. Sorry we missed you.

20 Now, Mike, have I made any other
21 mistakes?

22 (Laughter.)

23 VICE CHAIRPERSON BOYD: So far. Okay.
24 Well, for purposes of ease of discussion I'm going
25 to hereinafter refer to you as the AB-118 Advisory

1 Committee, rather than the very long title that is
2 afforded you in the statute. But should you ever
3 need that long title for some reason, feel free to
4 use it.

5 It's just why The California Energy
6 Resources Development and Conservation Commission,
7 which is who we are, is affectionately known as
8 the California Energy Commission, for ease of
9 public discussion; or The Commission, as we are
10 called in the statute, after once being defined.

11 Those of you who know me know I've been
12 around an incredibly long time in this business.
13 And I feel compelled to give a little bit of
14 history, because this is not just some recent
15 piece of legislation that was evolved because
16 somebody thought it was a good idea, absent any
17 kind of a history associated with the good idea.

18 California has been subjected to
19 transportation fuel price volatility really for
20 decades. In fact one of the reasons the Energy
21 Commission was created was because OPEC was
22 pulling the chain on the United States. And we
23 had one of our early Middle East oil crises,
24 coupled with the fact that there was concern about
25 the future of electricity in California some 30

1 years ago. And the California Energy Commission
2 was created.

3 And what that did was create a long-term
4 partnership between an older organization, the
5 California Air Resources Board, and the California
6 Energy Commission because there was an obvious
7 partnering and synergism between the idea of the
8 use of petroleum.

9 The Air Resources Board, where I happen
10 to have been at the time, was interested in
11 reducing vehicle emissions, and therefore was
12 interested in alternative fuels, which, at the
13 time, were all cleaner burning than was gasoline
14 and diesel fuel.

15 The Energy Commission was interested in
16 energy security because of the Middle East
17 situation; and was therefore seeking energy
18 diversity. And so an obvious partnership was
19 created. And at that time the Energy Commission
20 had money to spend on the subject of
21 transportation fuels. And the two agencies did a
22 lot of work on the subject.

23 Of course, as you all know, when OPEC
24 lets up on the chain, oil prices are reduced
25 historically, and gasoline prices fall, and the

1 public doesn't care that much anymore. But the
2 Energy Commission cared and recognized the need
3 for energy diversity for energy security purposes,
4 and continued to push on.

5 But the baton was transferred over to
6 the Air Resources Board, which to this day air
7 quality has been one of the big drivers of fuel
8 policy in this state. And we continue to partner,
9 as best we could, with the Energy Commission still
10 having money to spend on alternative fuels, which
11 were those alcohol fuels and natural gas and
12 propane and what-have-you. And actually a fairly
13 decent infrastructure was created for some of
14 those fuels.

15 However, as you all know, the energy
16 companies or oil companies, as they were then, got
17 sick and tired of the idea of hearing that alcohol
18 fuel might come to pass, and admitted they could
19 make gasoline that burned as clean as alcohol
20 fuel. And the Air Board won, and the Energy
21 Commission won, too. But, the real impetus for
22 alternative fuels really took a back seat. And
23 also the money evaporated or expired that was
24 spent on the subject.

25 So air quality gained a lot through

1 cleaner burning petroleum; alternative fuels were
2 parked at -- and alternative fuel technologies
3 were kind of parked at a plateau because the CAFE
4 ran out, as well.

5 Fast forward ahead a little bit. In
6 1999/2000 the state saw some price volatility
7 unlike it had seen for quite some time. And, of
8 course, the citizenry gets concerned, and
9 therefore the Legislature gets concerned.

10 Two pieces of legislation were passed,
11 one of them asking the Energy Commission to look
12 into the idea of building a strategic reserve of
13 finished fuel in California. Another one asked to
14 look at the idea of building a state-sanctioned or
15 sponsored pipeline from the Gulf to get our hands
16 on all that fuel that is obviously available from
17 the Gulf.

18 Well, the study showed that all that
19 fuel wasn't available, and that was totally
20 uneconomic. And the strategic reserve didn't make
21 economic sense.

22 But one of those two bills had a
23 provision in it that the two agencies should look
24 into the idea of how California -- could
25 California, and how might it, reduce its

1 dependence on petroleum.

2 And what I felt was a very good report,
3 which by then I was a Commissioner and working
4 frankly most strongly, I think, with Tom Cackette,
5 here, the two agencies produced a darn good report
6 indicating we got a real problem in this state.
7 The gap between supply and demand is going to grow
8 over time. We really need better technology. You
9 should double CAFE. And we really need to
10 introduce alternative technologies in fuels.

11 And it set out some goals, very
12 ambitious goals, of how much the state should
13 reduce its use of petroleum. Well, that report
14 had a lot of trouble getting political traction,
15 for obvious reasons, in Sacramento. It's a tough
16 subject to touch. It's a tough industry to take
17 on. And it languished a little while.

18 It also happened to come out in early
19 2003, and later in 2003 we had a political
20 revolution in California, and we changed
21 governors, as you all know.

22 Also in 2003, at the end of the year,
23 the Energy Commission did its first ever
24 Integrated Energy Policy Report, which is really a
25 product of the electricity crisis when the

1 Legislature said we ought to get that agency to
2 report every couple of years on all energy,
3 supply, demand, outlook, recommendations and what-
4 have-you.

5 And this agency took the 2076 report;
6 embodied it in the IEPR and pushed real hard on
7 the subject. The beauty of the Integrated Energy
8 Policy Report is it requires the governor in 90
9 days to comment on it.

10 Well, our Governor had a honeymoon going
11 at the time, and this was a whole new subject to
12 him. So, he took quite a bit of time to comment
13 on it. But when he eventually did, he basically
14 endorsed the idea we need to reduce our dependence
15 on petroleum. Said we really needed, though, a
16 plan.

17 Just so happened Assemblywoman Pavley
18 had a bill in the Legislature, AB-1007, that
19 called for an alternative fuels plan. The
20 Governor said he would approve that legislation.
21 And, therefore, again the Energy Commission and
22 the Air Resources Board produced this state
23 alternative fuels plan, which was issued at the
24 end of last year. And is a pretty, I think, a
25 darned good plan.

1 However, in that interim period, and
2 recognizing there's not a lot of political
3 traction going on in Sacramento, another group
4 formed in parallel, I should say the other track
5 the train I think we're riding on now.

6 A group created a California Action
7 Plan. A group that was entitled The California
8 Secure Transportation Energy Partnership, or
9 CalSTEP, that my friends at CalSTART actually
10 facilitated and started. And it produced a very
11 significant, meaningful report.

12 It was an across-the-board
13 public/private partnership effort; the
14 environmental community, auto community, oil
15 industries, what-have-you. It produced this
16 report which was introduced to the Administration
17 and the Legislature at the same time.

18 One problem for the Administration is it
19 had just introduced the low carbon fuel standard.
20 So, Assembly Speaker Nunez, however, picked it up.
21 And it became the basic foundation for the
22 introduction of legislation that is AB-118, that
23 brings us all here together.

24 There's two or three people in this room
25 who served with distinction on that panel.

1 Professor Sweeney being one of them, which made
2 him an obvious candidate to participate in the
3 effort. John Boesel hiding back there in the
4 audience somewhere is the other -- hello, John --
5 who was the prime mover and participated in this
6 effort.

7 And in the interest of full disclosure
8 you'll find my name and picture on the front
9 cover, should you ever bother to look at it.

10 In any event, these are all the planets
11 and stars that kind of came together that led to
12 AB-118, which after this agency had recommended
13 for years that it needed money to implement
14 alternative fuels, but could get no traction. And
15 even though we had a public goods charge to
16 address electricity and natural gas, we had a
17 tough time getting any money to address
18 transportation fuels, to make all three legs of
19 the three-legged energy stool equally sound.

20 And we got AB-118 to do that. And so we
21 have, and the Air Resources Board, our partners,
22 have each been provided a program with a healthy
23 amount of money to help California really strive
24 to reach out and address this goal that is known
25 of for years, if not for decades.

1 And so this is among the many reasons
2 I'm still a Commissioner, and not retired, having
3 volunteered to do a second term. And this
4 Governor fortunately liked the idea, so here I am
5 again.

6 But this does facilitate roughly \$120
7 million a year over a period of seven and a half
8 years for the Energy Commission, and \$20 million a
9 year for that same time period for the Air
10 Resources Board, to carry out programs as
11 envisioned in the law.

12 The Energy Commission, being kind of out
13 of the business for many years, and unknown to
14 many people in this room as ever even having had
15 experience in this arena, and also spending a very
16 large amount of money that affects so many
17 disciplines, is provided, with you, the Advisory
18 Committee, to help us create an investment plan
19 for that money.

20 So, that, by way of a lengthy
21 discussion, is some of the background that leads
22 us to where we are today that hopefully might be
23 useful to many of you to understand. I'm a great
24 student of history, which is why I'm compelled to
25 do things like this, and discuss history and

1 chronology. And also I find that it does help to
2 provide a background; there are things to fall
3 back on, reasons to understand why we do what we
4 do. And perhaps even avoid, you know, making
5 mistakes that were made in the past.

6 So, with that, I would finish my
7 statement for the day. Again, thank all of you
8 for being here. And hopefully now I'm setting
9 things up for us to proceed with the creation of
10 an investment plan, and to seek your advice and
11 counsel.

12 And with that we'll move on on the
13 program, unless somebody has a question of me, to
14 the AB-118 program overview and Mike Smith. Any
15 comments or questions? Yes, Mike.

16 MR. WALSH: Will either of the reports
17 that you just mentioned, the Energy Commission
18 report of late last year or the CalSTART report,
19 be available to us or on the website or something?

20 VICE CHAIRPERSON BOYD: The alternative
21 fuels plan is on the Commission's website. And,
22 John, I have one of the last existing printed
23 copies. Is it available on a website somewhere?

24 MR. BOESEL: Yes, Commissioner, it is
25 available on the website www.calstep.org. You can

1 download a copy of the report. And we are going
2 to publish additional copies.

3 And I also did want to point out that
4 Mr. Carmichael also served on the CalSTEP
5 partnership, --

6 VICE CHAIRPERSON BOYD: Oh, good
7 heavens.

8 MR. BOESEL: -- as well as here on the
9 Advisory Committee.

10 VICE CHAIRPERSON BOYD: I'm indebted to
11 you forever, Tim.

12 MR. CARMICHAEL: No --

13 (Laughter.)

14 VICE CHAIRPERSON BOYD: Oh, well,
15 perhaps that's why -- yes, Tim, former President
16 of CalSTART. Tim, a valued member of the CalSTEP
17 effort.

18 MR. CARMICHAEL: If I could just
19 mention, Commissioner Boyd, I think you said \$20
20 million a year to the Air Resources Board. I
21 believe it's \$80 million a year.

22 VICE CHAIRPERSON BOYD: You're correct
23 and I was wrong.

24 MR. SPEAKER: It's 50, actually.

25 (Laughter.)

1 VICE CHAIRPERSON BOYD: Tom, you should
2 have jumped in and corrected me. You're sitting
3 here and heard me blunder.

4 Okay, Mike, it's all yours. Mike Smith,
5 who's -- well, I'll let him introduce himself.

6 MR. SMITH: Thank you, Commissioners.
7 My name is Mike Smith and I'm the Deputy Director
8 Fuels and Transportation here at the Commission.

9 Before I begin my brief overview I do
10 want to mention a couple of extra housekeeping
11 items that I neglected to mention. First off,
12 these microphones, you have to speak very very
13 close to the microphones to be picked up clearly.
14 So when you speak into the mikes at the table or
15 the podium, please get very close to it so others
16 can hear you clearly.

17 Secondly, we have Debbie Jones, who has
18 blue cards. If you wish to ask questions, raise
19 questions to the Committee or the Commissioners,
20 please grab Debbie and fill out a blue card and
21 we'll get them up to Commissioners Boyd and
22 Douglas. And your questions will be addressed in
23 the order that they have been presented.

24 Also, we have a number of people online
25 that are listening in. And we have them muted out

1 for the time being. However, we can tell up here
2 when they want to ask questions, so we'll un-mute
3 them to ask questions online.

4 We'll take any questions from the
5 audience first, and then go to those online. One
6 of the fundamental principles of this group is
7 trying to engage not only the input from the
8 Advisory Committee, but the public and
9 stakeholders who are not part of the Advisory
10 Committee, itself. So we hope this will
11 accommodate all comments.

12 Did I leave out any other -- I need to
13 ask my entourage here to make sure I haven't left
14 anything out.

15 For those that are listening in on WebEx
16 there's a raised-hand icon that you need to click
17 on when you have a question to ask. And that will
18 show up here on the screen. Thank you.

19 My job here today this morning is to
20 sort of give you a brief overview of the program.
21 I'm going to try and do it quickly. Commissioner
22 Boyd gave an excellent overview, sort of the
23 history of where we got to today, why we're here
24 today. So I'm going to quickly go through that.

25 But I'd like to spend a little bit of

1 time towards the rear of the presentation on the
2 Advisory Committee and the investment plan. And
3 hopefully it'll give you folks some insight in
4 helping facilitate your deliberations, not only
5 today but in the next 0-- the series of Advisory
6 Committee meetings that are planned over the
7 summer.

8 Commissioner Boyd already walked through
9 each of these, and I will not dwell on them other
10 than to mention that it has been a long history
11 and we are at a remarkable point in time with this
12 program. And we have an opportunity to make some
13 very meaningful progress in reducing our petroleum
14 dependence, meeting the state's air pollution
15 objectives and greenhouse gas reduction targets.

16 The purpose of the program basically is
17 to transform California's transportation market.
18 We have a system now that is singularly dependent
19 on gasoline and diesel. And this program we hope
20 to transform that to a multifuel market in the
21 future. We will be consistent with the state's
22 climate change policy, low carbon fuel standard.

23 The program also is we're designing this
24 program to achieve the alternative fuel targets
25 that we established in the 1007 report that

1 Commissioner Boyd had mentioned in his opening
2 remarks. They're very aggressive, and it will
3 take a combination of regulation, as well as
4 market programs such as the 118 program, to
5 accomplish.

6 In doing this we don't envision any
7 silver bullet. We envision many silver bullets or
8 silver buckshots, as Commissioner Boyd will
9 commonly remark. We just simply are not in a
10 position to be able to afford to pick winners.
11 All fuels, all reasonable fuels need to be brought
12 to the marketplace if we're going to achieve the
13 very aggressive goals that we've set for
14 ourselves.

15 To give you an idea of the mountain we
16 have to climb, this is a snapshot of the gasoline,
17 the fuels market in California. As you can see
18 gasoline and diesel dominate. There's a small
19 sliver that is ethanol that may range anywhere
20 from 5.7 up to 10 percent over the next couple of
21 years.

22 But I draw your attention to that very
23 very thin green sliver that is the alternative
24 fuel use in California. If we are going to
25 achieve the goals we've set for ourselves you can

1 see very clearly we have a long long way to go.

2 Just to give you an idea of the
3 magnitude, if we achieve the goals set, the 2022
4 targets for alternative fuel use in California,
5 they're identified in the 1007 report, that will
6 require something on the order of 5 billion
7 gallons a year that need to be used in the
8 transportation fuel market. To get there will
9 require that the market accept annually about a
10 million gallons of new supply of alternative
11 fuels. That's an enormous number.

12 And so the undertaking is going to be
13 very very, I want to say difficult, but it will be
14 difficult. I just want to give you an idea of the
15 magnitude, the mountain we're climbing.

16 The statute actually sets out a couple
17 of very fundamental goals for the Energy
18 Commission. And these same goals apply to the
19 ARB's programs, as well. But I will focus on the
20 Energy Commission's.

21 One of the most important things we have
22 to accomplish in this goal setting is setting a
23 sustainability goal. This is going to be a fairly
24 difficult undertaking. It's a fairly new issue
25 that is emerging and we are working diligently

1 with stakeholders and with the Air Resources Board
2 trying to set a goal that will meet the needs of
3 this program over the years that this program will
4 be administered.

5 We also will fund projects, only
6 projects that are not otherwise required to be
7 undertaken by existing laws or statutes. This
8 also will require a certain amount of finesse to
9 find that line as to where existing laws and
10 funding opportunities for this program begin.

11 The statute also asks that whatever we
12 do, that we be able to quantify it and measure it.
13 It also establishes -- requires the Air Resources
14 Board -- this is going to take a little longer
15 than I thought if I have to keep doing that very
16 couple minutes -- it also requires the Air
17 Resources Board to implement what we have commonly
18 termed anti-backsliding guidelines.

19 The Air Resources Board expects to have
20 those before their Board in late September, I
21 believe. And that fits very nicely into our
22 schedule, which I'll talk about in a few minutes.

23 Lastly, the statute gives us a great
24 latitude in the tools that we use in funding
25 projects ranging from grants, revolving loans,

1 loan guarantees, and most importantly, other
2 appropriate measures. We intend to explore all
3 possible tools that meet the needs of the market
4 in pushing fuels and vehicles into the
5 marketplace.

6 The statute tells us that we have to
7 give strong preference to certain factors. And
8 you'll see this term lifecycle basis used quite a
9 bit from now on. Lifecycle basis or full fuel
10 cycle basis. This is going to become the unit of
11 measure by which we do things in this program.

12 We are going to be examining fuels from
13 the full cycle of their development, from fields-
14 to-wheels, wells-to-wheels, or whatever other
15 origins of fuels that we look at. But we will be
16 looking at their full fuel cycle impact in order
17 to determine if, and to what degree, we support
18 them and move them into the marketplace.

19 The bill identifies several factors that
20 we need to strive for, including decreasing
21 greenhouse gas emissions by at least 10 percent;
22 if we support fuel blends, that we should strive
23 to support those fuel blends that have at least 20
24 percent renewable or alternative component.

25 Using the existing --

1 MR. McKEENAN: Got a question on that.

2 MR. SMITH: Yes.

3 MR. McKEENAN: This is Jay McKeenan with
4 the California Independent Oil Marketers. At the
5 20 percent level, especially for biofuels, we're
6 going to start running into backsliding problems.
7 Especially with ethanol, at least ethanol in its
8 current blend with gasoline.

9 And we're also going to run into some
10 other issues with biodiesel at the 20 percent
11 level. I mean I think this is just a transition
12 problem that we're going to run into, especially
13 in the next few years, as we don't have really
14 good alternatives out there in terms of meeting a
15 20 percent blend requirement.

16 This is just something that we need to
17 keep our eyes open about.

18 MR. SMITH: It's a very good point, Jay,
19 and I might add a third issue, and that is of
20 supply. And keep in mind that these are
21 preferences. The statute doesn't require us to
22 fund each and every project in this manner, but to
23 strive for that.

24 It builds in a certain latitude into the
25 statute that allows us to weigh various factors in

1 determining the projects we fund. And the issues
2 that you raised are very good and certainly will
3 be considered by the Commission.

4 VICE CHAIRPERSON BOYD: Mike. Jim Boyd.
5 I think I just want to build on that. As I sit
6 here I reflect on all the work the Air Resources
7 Board did in the past couple of years on the idea
8 of maybe increasing the amount of ethanol in
9 California's gasoline supply from the 5.7 percent
10 level, and I won't speak for Tom here, but they
11 did get it up to 10, with a lot of agony.

12 And I think your point's a good one with
13 regard to the ability to go beyond that. But
14 that's a technical subject that will be debated,
15 I'm sure, by lots of people.

16 We've had the same problem, as you point
17 out, on biodiesel. The engine manufacturers, to
18 date, have not been willing to have their
19 warranties go beyond what, B-5? And we played a
20 lot around with B-2.

21 So going beyond B-5 will be a major
22 hurdle for lots of folks. It will also enable
23 lots of interesting technological discussions and
24 what-have-you.

25 So I like Mike's word as a preference,

1 although the language in the bill is kind of
2 strong, I think the subject lacked a lot of debate
3 as the legislation was put together. So I think
4 that's something the implementation plan Advisory
5 Committee will help us with, and have to ponder as
6 we come up with a plan.

7 COMMISSIONER DOUGLAS: Looks like we
8 have two more comments. Roland.

9 MR. HWANG: Roland Hwang with NRDC.
10 Mike, I've noticed you used the terminology
11 strive. Now, the legislation, I see these as
12 mandatory requirements, criteria. I would
13 interpret that as mandatory requirements. Say
14 particularly on quantitative qualification
15 standards, such as 10 percent, you know, gas
16 reductions, 20 percent alternative fuels blends.

17 So can you clarify, from your
18 perspective, when you use the word strive. I
19 would use a different terminology, and I would
20 argue that requirements of the bill are mandatory
21 requirements for these criteria.

22 MR. SMITH: Thank you, Roland. The
23 statute, as it's written, lays out these criteria,
24 and asks the Energy Commission to consider them as
25 appropriate. The language, as we interpret it,

1 isn't a mandatory language, a mandatory
2 requirement. But has language that allows us a
3 certain flexibility to use the criteria as
4 appropriate.

5 Strive may be too soft a word. We take
6 these criteria, the preferences, very very
7 seriously. There may be reasons why, as Mr.
8 McKeenan pointed out, why we can't always fund a
9 project that, for example, has a blend of at least
10 20 percent of renewable component. But we
11 certainly would want to move, that would be the
12 goal and we would want to move in that direction.

13 But, from our standpoint, the language
14 has a little bit more flexibility than you're
15 describing as mandatory.

16 MR. HWANG: I would argue that the "as
17 appropriate" criteria, as appropriate, you have a
18 pretty high bar for not funding projects -- for
19 funding projects which are inconsistent with this
20 criteria.

21 Certainly if there are conflicting
22 criteria, that certainly is appropriate to
23 consider that. Certainly we would not argue that
24 you would fund projects that aren't consistent
25 with all criteria.

1 However, I would certainly argue that
2 criteria and "as appropriate" language sets a
3 fairly high bar if the Energy Commission chooses
4 to fund a project that does not fit these criteria
5 in the statute.

6 MR. SMITH: I would agree with the high
7 bar characterization.

8 DR. SWEENEY: On the definition of
9 lifecycle basis, there's -- I'm not clear what is
10 allowed to be included and not allowed to be
11 included in this. And in particular, there's a
12 lot of evidence now that when we use corn to
13 generate ethanol it pushes up the availability of
14 corn for food, pushing up world food prices. And
15 therefore leading to conversion of forest lands to
16 agricultural lands, leading to increases in carbon
17 dioxide, while on the lifecycle, direct lifecycle
18 it may decrease.

19 Do we include that indirect effects, or
20 do we only include under this law the direct
21 effects of the carbon dioxide in the lifecycle
22 basis calculation?

23 MR. SMITH: Our intent is to do the best
24 we can, and to the best science and data will
25 allow us is to include the indirect effects.

1 DR. SWEENEY: Good, thank you.

2 VICE CHAIRPERSON BOYD: I would just
3 point out, and maybe I should not have skipped
4 over the title of the bill when I tried to use the
5 shorthand version, but the bill's formal title is
6 The California Alternative and Renewable Fuel
7 Vehicle Technology Clean Air and Carbon Reduction
8 Act of 2007.

9 So, just to back up what Mike said,
10 we're totally -- both agencies are painfully
11 conscious of what constitutes a full fuel cycle
12 analysis, and how deep a pool that is to dive into
13 to understand it all. So, again, you're right,
14 that's one of the challenges this group faces.

15 On the previous discussion I would want
16 to point out that -- well, having turned the
17 places in the law -- section 44271.5 -- I'm sorry,
18 44272(b) says: The Commission shall provide
19 preferences to those projects that minimize the
20 goals -- I'm sorry, I'm having a tough day today -
21 - maximize the goals of the alternative and
22 renewable fuel vehicle technology program created
23 by such-and-such, based on the following criterias
24 appropriate."

25 But I think it did recognize, Roland,

1 that there is a very high bar, and there's a tough
2 row to hoe in some areas. And the investment plan
3 that the Advisory Committee recommends to us will
4 therefore, I think, have to take into account the
5 high bar, and maybe some reality, as well.

6 MR. HWANG: If I could respond to that,
7 Mr. Boyd, I appreciate that reference. Because I
8 do want to point out from our perspective just
9 reading through the presentation, which is a
10 very -- appreciate the presentation, it's a very
11 clear explanation for many of the major
12 components.

13 But I guess what I view is missing here
14 is the issue of a primacy of the global warming
15 reduction goals, and how this program is intended
16 to support such.

17 The section you pointed out to is just a
18 good case in point. I would point that out at the
19 very beginning. Which is under section 44272(a)
20 of the establishment of a program.

21 The second sentence, a very long
22 sentence, reads: The program shall provide" et
23 cetera, et cetera, "to develop and deploy
24 innovative technologies that transform
25 California's fuel and vehicle types to help attain

1 the state's climate change policies."

2 So this is the only goal which is
3 expressed in terms of environmental or other kind
4 of policy goals is expressed in establishing of
5 the account.

6 So I would strongly argue that the most
7 reasonable interpretation of the intent of the
8 legislator is that this program must provide, must
9 be geared towards meeting our climate change
10 reduction goals, particularly around AB-32, the
11 low carbon fuel standard. And that's really the
12 establishment.

13 Now, these funding preferences in this
14 criteria in the following sections certainly
15 provides additional guidelines. But the overall
16 structure of the program, the purpose of the
17 program is clearly geared to climate change
18 emission reductions.

19 I would also argue strongly that when
20 you say in the criteria consistent with the
21 state's climate change goals, I think that all of
22 us who have read through the AB-1007 report read
23 through the low carbon fuel standard materials out
24 there, can clearly see that if your fuel or your
25 technology is not contributing to substantial

1 reductions in greenhouse gases, that that is not
2 going to be consistent with attainment or the 2020
3 goals.

4 Every gallon, every Btu displaced going
5 forward today, and every precious public dollar we
6 put into this has to be geared for substantial
7 reductions. Otherwise you're displacing other
8 efforts which are necessary to achieve our 2020
9 goals.

10 So, I would also argue that the Speaker,
11 himself, has established the purpose of 118 as
12 being, I think there's good evidence in the record
13 that the Speaker, himself, has established in the
14 record that the purpose of this account is to meet
15 our climate change goals.

16 Not to say that all these other
17 reductions goals, air quality goals, are not
18 critically important, however when we argue about
19 the balancing of the criteria, and balancing of
20 what ultimately is in the investment plan, it has
21 to be seen through the lens of the primacy of
22 attainment or climate change goals. And I would
23 strongly argue that should be geared around 2020
24 as the appropriate goal set forth in AB-32, the
25 low carbon fuel standard, for example. Of course,

1 all of that's established in the firm goal of 10
2 percent reduction by 2020.

3 VICE CHAIRPERSON BOYD: Roland, I don't
4 think you have to argue your points; I don't think
5 there was anything contrary to your point. But
6 your points as well made. I think in
7 acknowledging what the title of the Act was, I
8 tried to indicate we're quite cognizant at this
9 agency of the overall goals.

10 But it's good to get into the record
11 some of the background there. But I don't think
12 you had an argument going here with us. So, thank
13 you for that clarification.

14 Mike, you --

15 MR. SMITH: The only thing I might add
16 to that, Commissioner, is going back to the 1007
17 report and the full fuel cycle analysis that was
18 done in conjunction with that report.

19 What we found is that many or most of
20 the fuels that we examined on a full fuel cycle
21 basis in the work we did in conjunction with the
22 Air Resources Board, have a carbon footprint at
23 least 10 percent less than the reformulated
24 gasoline or CARB diesel specification.

25 So we take a certain amount of comfort

1 in knowing that at least based on the analysis we
2 did last year that we have a number of options
3 that could advance this 10 percent, or at least 10
4 percent, criteria that's in the statute.

5 There are certainly options in that
6 analysis that go beyond that, and I think the
7 Commission will pursue those. But I just want to
8 point out that now that doesn't include any
9 further analysis that we intend to do over this
10 next year or so on indirect effects, which may
11 alter that analysis somewhat. And whatever other
12 work that the Air Resources Board is doing with
13 respect to sustainability and the full fuel cycle
14 work as part of their low carbon fuel standard.

15 We viewed this as a dynamic, sort of
16 living or evolving process so that 1007
17 conclusions about full fuel cycle assessments may
18 alter here in the very near future.

19 VICE CHAIRPERSON BOYD: Mike, I know
20 Bonnie wants to say something, but I want to say
21 something first. And I don't want people to get
22 real fixated on what Mike just said with regard to
23 what the 1007 report said.

24 Because, by our early admission, the
25 full fuel cycle analysis that we did for that

1 report, in my opinion, is the best one every done.
2 But as I've said in several public settings, once
3 you get to understand the gravity of what's meant
4 by a full fuel cycle analysis, and consistent with
5 all the discussions we've had, and as my crude
6 analogy is, that, you know, we dove into a pool
7 and took a deeper dive than anyone has ever taken.

8 And when we got there we realized you
9 can't even see the bottom of this pool. This is
10 so complicated, and the scientists are going at it
11 with regard to trying to develop models that take
12 all of this into account.

13 So, what we did, when we did it, was a
14 very good analysis that began to give
15 directionally what's going on. We're not going to
16 defend everything we do in the future on what's in
17 that analysis because it is just a beginning.

18 And the more we learn on a daily basis,
19 the more complex this issue gets. And as some of
20 the scientists have already done some preliminary
21 work that shows that the indirect effects are
22 significant, and we need to dig deeper into those.

23 But at the time we did that analysis it
24 said, boy, you know, alternative fuels are going
25 to help. They are at least, you know,

1 directionally it looked like, based on the
2 analyses then, X percent better.

3 But I'm not going to hang my hat on that
4 number, because that did not take into account a
5 lot of the indirect consequences that we're
6 beginning to realize. And I know this agency, I
7 know Karen and I deeply understand that problem.

8 And I might, to mitigate against any
9 concerns that we're fixated on something, point
10 out that the first plan we adopted was not an
11 alternative fuels plan, it was a bioenergy plan.
12 And immediately in this world you say bioenergy
13 and everybody gets excited about growing energy
14 crops.

15 California has heavily emphasized the
16 use of the wastestream for energy, and not heavily
17 endorsed the concept of growing energy crops, for
18 the very reason that we recognize some of the
19 indirect consequences. And so this agency and
20 this Governor have recognized that dilemma very
21 early on. And we adopted ambitious goals that
22 were heavily predicated on trying to avoid some of
23 those indirect consequences by looking at that.

24 But that's not a subject of -- well, it
25 is a subject -- everything's a subject of what

1 we're talking about in this body. And I wanted to
2 mention that. I actually kind of left that out of
3 my introduction, and I guess I also left out the
4 reading of the title of the Act, which I did read
5 to you a few moments ago.

6 And I did comment that air quality has
7 been the strongest persistent driver of all. That
8 energy security and diversity early on was a
9 consideration. That 9/11 in this country made it
10 a great consideration. Price volatility in
11 California added to that.

12 But the greatest driver of all that is
13 recognized by this agency is climate change. I
14 mean everything we're doing fits into that tent,
15 under that umbrella. And climate change and AB-
16 32, you know, forced the greatest systems analysis
17 that we're ever going to undertake in this state,
18 and pushes all these issues together.

19 So, there's no question that that's
20 where we're riding, and that has to be taken into
21 account. And I apologize for not including that
22 in my introductory remarks. It might have helped
23 clear the air a little bit on where this agency's
24 coming from. But nonetheless.

25 Any, Bonnie, you had a comment.

1 MS. HOLMES-GEN: Thank you, Commissioner
2 Boyd. And I just wanted to make two points. And
3 one is to back up and agree with my colleague,
4 Roland Hwang, in terms of the pivotal nature of
5 the criteria that are listed that we've just gone
6 over here for funding projects.

7 And I believe that these criteria really
8 are viewed by the Legislature as very basic
9 criteria for a project that should be funded by
10 this Act. And I think they're critically
11 important to the public spending for projects, and
12 for the assurances to the public that these
13 projects are going to delivery the greenhouse gas
14 and air quality benefits that the state
15 desperately needs.

16 And I also just wanted to comment on,
17 you know, the pivotal nature, as you just
18 mentioned, of air quality in this legislation.
19 Not only is air quality mentioned in this list of
20 what I would argue are some basic criteria, but
21 there's also a separate provision in the statute
22 that you referred to earlier as the anti
23 backsliding criteria in section 44271(b).

24 And that's where the statute sets out
25 criteria for both the air quality improvement

1 program, and the energy fuels and technology
2 grants. And the criteria clearly states that
3 activities must complement and not interfere with
4 efforts to maintain some federal and state air
5 quality standards.

6 And specifically that activities must
7 maintain or improve upon the emissions reductions
8 and air quality benefits that are attained by
9 phase two reformulated gasoline standards and
10 diesel fuel, reformulated diesel fuels.

11 So I just wanted to point that out, this
12 is clearly cited in the Act as a primary driver.
13 In addition to the fact that there is, as was
14 mentioned earlier, 80 million total that's going
15 to air quality projects from this fund. Again,
16 because of the importance of insuring that as we
17 move forward on promoting alternative fuels, we
18 are, at the same time, making critical progress
19 toward our air quality goals.

20 And I know you know that, but I just
21 wanted to bring that up as we're talking about
22 this in the Advisory Committee, to make sure that
23 we're all starting from that place. Greenhouse
24 gas is, of course, a critical and a primary
25 driver. Air quality is also a critical driver for

1 what we're doing here.

2 COMMISSIONER DOUGLAS: Thank you,
3 Bonnie. Let me see if I can sum up what I've
4 heard so far. And I think Roland made a very
5 strong point about climate being listed here as a
6 primary driver for our thinking on 118.

7 And there's also, as you point out,
8 Bonnie, very very strong policy in this bill, not
9 only on the anti backsliding side, but also
10 pushing us to really look for funding projects
11 that have the potential to also help us make
12 strides in air quality. And so I appreciate that.

13 And we also, I think, get the message
14 that the criteria, the funding preference listed
15 here, are very important. And obviously the range
16 of proposals that we actually get, and the way
17 that they match with the criteria will help us --
18 will be important in knowing how well we can match
19 every one of the criteria with all the proposals.

20 But these are very important practices.
21 And we certainly hope that we'll get a lot of
22 proposals that match up very well.

23 VICE CHAIRPERSON BOYD: Mike, would you
24 like to get back to your list? Oh, -- no, --

25 COMMISSIONER DOUGLAS: No, no, we got --

1 DR. SWEENEY: Just one more comment. I
2 think that we would be making a several mistake if
3 we focus too much attention on it's one goal or
4 the other. As I read the language, and I was
5 somewhat familiar with the history that got to it,
6 petroleum use reduction was also an important goal
7 because of the economic consequences to the state.

8 And yet many of the -- in fact, most of
9 the things we'll do should be consistent with the
10 goals of reducing petroleum use, reducing the
11 insecurity of the economy associated with
12 petroleum use, reducing carbon dioxide use. And
13 as we get to better energy efficiency issues, we
14 probably can reduce some of the local air
15 pollution.

16 So I hope this Committee doesn't focus
17 attention on which of these is primary, when they
18 all are going to, if we do it right, can all work
19 in very much the same direction.

20 Clearly, there'll be some goals, some
21 things that harm one and help the other. Then we
22 can debate it. But, let's recognize that most of
23 these things work in exactly the same direction at
24 least when we get to the efficiency of the use of
25 the vehicles.

1 COMMISSIONER DOUGLAS: I definitely hear
2 you on the efficiency point. And I didn't mean to
3 leave petroleum reduction off the list. But there
4 are times when those, the three goals of air
5 quality, climate and petroleum reduction don't
6 coincide exactly. And I think the statute
7 provides us guidance in those cases for how to
8 prioritize in our analysis.

9 I see Tom Cackette has pulled his
10 microphone close.

11 MR. CACKETTE: Thank you. Just a
12 quick -- I wanted to elaborate on Roland's points,
13 and Jim, I think his correct assessment of it,
14 that fuel goals and climate change usually coexist
15 with the same objective.

16 One thing that Roland said, though, was
17 that climate change should be our goal and 2020
18 should be our goal, because that's what the law
19 AB-32 says.

20 One nuance of that that's been very
21 important to us is that you have to remember that
22 achieving 2020 goal, all that does is wipe out
23 three decades of growth. It doesn't get us
24 anywhere towards a stabilized climate.

25 And the stabilized climate is really

1 defined in the 2050 goals. The 60, 80 percent
2 reduction; the 80 percent is the number that the
3 Governor has projected.

4 And so I wanted to make the point that I
5 think an important goal is that even though we
6 look at 2020, because that's so well established
7 in statute, that we need to make sure that we're
8 really looking at 2050. And that we don't invest
9 resources that might help in 2020 that are a dead-
10 end towards getting to 2050.

11 Again, I doubt that that's going to
12 happen very often, but it's something to keep in
13 mind, that the real end-game here is the 2050
14 reductions.

15 MR. HWANG: I'd absolutely concur with
16 that.

17 VICE CHAIRPERSON BOYD: And I want to
18 build on that because, as Tom knows, the state
19 alternative fuels plan that we both prepared goes
20 out to 2050. And it's the first time both of our
21 agencies have agreed that it made sense to go so
22 far into the future, since the future is
23 historically so cloudy because in recognition of
24 what the state's goals were, we included the
25 vision all the way out to 2050 to take that into

1 account, even though it's the state alternative
2 fuels plan to try to meet all the various
3 objectives we've been talking about here this
4 morning.

5 So there's no lack of recognition on the
6 part of the state agencies charged to carry out
7 the requirements of AB-118, which in turn, were to
8 help us make the -- you know, to implement the
9 alternative fuels plan, that all these issues are
10 to be considered. And that we did look to the far
11 far future to meet the goals that Tom has
12 iterated. So.

13 COMMISSIONER DOUGLAS: We have two more
14 comments.

15 MR. CLARKE: Steve Clarke from AIC. I
16 welcome a lot of the comments that have been made
17 earlier about particular lifecycle basis, and the
18 last two comments about providing economic
19 benefit.

20 At \$50 a barrel it's pretty difficult to
21 get people interested in alternative fuels. At
22 \$80 a barrel it was considered a transitory
23 environment, and still would be difficult. The
24 world's changed at \$120 a barrel.

25 One of the things that, a question for

1 the Committee is I really applaud this preference
2 for the idea of using a lifecycle calculation. I
3 think there's a number of initiatives that in the
4 past in alternative fuels that would fall by the
5 wayside, and would have been seen to have been
6 blind alleyways if we'd have a more appropriate
7 use of a lifecycle analysis of all the technology
8 and its impact on greenhouse gases and other
9 emissions.

10 How are we going to implement that is
11 the right thing to say. But how are we going to
12 be assured that we are viewing proposals with an
13 equivalence, and an equivalent rigor in lifecycle
14 basis.

15 It is a black art at the moment. And my
16 fear is that it could become a boondoggle for
17 consultants generating lifecycle analyses that
18 look wonderful and get projects sold.

19 COMMISSIONER DOUGLAS: I think that's a
20 great question which, Mike, in your presentation,
21 moving to get further into that question?

22 MR. SMITH: No, not too deeply other
23 than just to mention that we are looking into it
24 over the course of this summer and fall. And
25 probably is actually going to take, you know, a

1 couple of years to sort of firmly get our arms
2 around the issue of sustainability and indirect
3 impacts.

4 MR. CLARKE: Could I just respond to
5 that. I think -- I'm heavily involved in private
6 funding of clean fuel initiatives which is how I'm
7 able to sit on this Committee.

8 Last week I was talking to a number of
9 Peninsula-based investors, and it's anybody's
10 guess that there's something around \$5- to \$15
11 billion available right now in California for
12 clean fuels through private equity investors.

13 And is often the case with loose money,
14 lots of seemingly great ideas get chased real
15 hard, and there's some -- frankly silly investment
16 decisions. I don't think we have two years. I
17 don't think we have two years to get lifecycle
18 basis right.

19 I think it's something that if the
20 Commission gets this right, if we, as a group, get
21 this right, and if we are able to implement a
22 transparent equivalent lifecycle basis for looking
23 at alternative ideas, I think we could do
24 something remarkable. I think we've got to take
25 the lead in being a gold standard for some of the

1 private investments that's going to these fuels
2 right now.

3 Because I'm still seeing lots of the
4 same old tired ideas, you know, let's go grab some
5 land in Guatemala, rip out the rain forest and
6 there's tons of loose money for that. It would
7 fall apart if we did a lifecycle analysis on it.

8 And California's set the standard for
9 here's how we look at our alternative energy
10 industry.

11 COMMISSIONER DOUGLAS: I think that's a
12 really interesting comment, and possibly something
13 that we may also address through some of the
14 sustainability goals, that we will set as part of
15 this program.

16 There are a lot of people with their
17 hands up. Ms. Sharpless, you had --

18 MS. SHARPLESS: Yes. You just mentioned
19 sort of the basis of my question, and it's the
20 sustainability goal. We've heard, you know, the
21 criteria that has been enumerated in the law.
22 We've heard a series of goals that have already
23 been established in different reports.

24 We've heard that this legislation has
25 incorporated a lot of recognition of these goals,

1 and the need to balance between the various
2 competing policy drivers in this area.

3 And then we have, yet, this sort of new
4 thing that's still under construction that's part
5 of this 118. And it's to establish the
6 sustainability goals.

7 So, my question is, what was the thought
8 in the drafters of this legislation in requiring
9 the establishment of sustainability goals when
10 there's so much specificity already in the
11 criteria, and looking at how projects are being
12 funded. How are these things going to dovetail?

13 VICE CHAIRPERSON BOYD: Don't look at
14 me. I wasn't one of the --

15 (Laughter.)

16 VICE CHAIRPERSON BOYD: There's a lot
17 about this bill that's --

18 MS. SHARPLESS: Well, I guess --

19 VICE CHAIRPERSON BOYD: -- difficult and
20 mysterious.

21 MS. SHARPLESS: -- do we pay as much
22 attention to that, as a group, as a Committee,
23 when we're looking at -- I know we're not going
24 to, this comes later, I think, in Mike's
25 presentation. We're not being asked to look at

1 the fine detail. We're being asked to look at the
2 5000, you know, feet or mile detail.

3 So, I just need some clarity as to when
4 we're trying to go through this process, which of
5 these things do we give greatest weight to.

6 COMMISSIONER DOUGLAS: I see -- I have
7 Roland, Tim Carmichael, John Shears all -- and
8 also Tom Frantz all indicating from that end of
9 the table. Perhaps if you could speak in that
10 order. And I think they had some involvement.
11 And then Peter Cooper.

12 MR. HWANG: I'd like to go after John
13 because I think John wanted to respond directly to
14 Ms. Sharpless' remark.

15 COMMISSIONER DOUGLAS: Oh, John, and
16 then Roland. Okay, John.

17 MR. SHEARS: Yeah, John Shears with the
18 Center for Energy Efficiency and Renewable
19 Technologies. Not so much a response
20 specifically, but just a general remark.

21 I think if people on the Advisory
22 Committee haven't already got the sense, when I
23 first saw, you know, in AB-118 it says at least
24 three workshops. Prepare yourself, I think we're
25 going to be having more than three workshops.

1 The issue, as Commissioner Boyd referred
2 to earlier, is one of the most complex areas to
3 deal with. You know, not that climate in itself,
4 dealing with climate is a simple issue, but
5 transportation and transportation fuels and the
6 linkage with vehicle technology is very very
7 complicated.

8 And as a lot of the recent scientific
9 research, or especially over the last 12, 18
10 months has indicated, there are a lot of
11 unintended consequences. I think that also
12 Stephen Clarke was referring to, and Professor
13 Sweeney, with regards to especially, you know, how
14 we approach biofuels.

15 So I think the intent in including
16 sustainability language in the bill was to make
17 sure that we think about these issue so that we do
18 not create situations where we have unintended
19 consequences.

20 Because what California is going to be
21 doing, you know, here we go waving the California
22 flag again, everyone is watching what we do. This
23 is a long program; it's been around seven years.
24 We're going to take, you know, hopefully we'll
25 crawl before we walk before we run during these

1 seven and a half years of this program.

2 But we want to make sure that we send
3 the right signals as to what California is going
4 to be doing over the next seven, seven and a half
5 years.

6 At the same time we want this program to
7 be a synergistic as possible with the broader
8 state goals and with the efforts that are ongoing
9 over at the ARB with regards to the development
10 of the low carbon fuel standard.

11 So we want the team to really work
12 together synergistically on these sustainability
13 issues. And, you know, hopefully, and we'll be
14 working, and I think we may have to have some
15 workshops where we have some people come and
16 address us. We need to make sure that we stagger
17 the work process, you know, this year and
18 subsequent years here at the Energy Commission on,
19 you know, disbursement of these funds with the
20 ongoing developments of the low carbon fuel
21 standard. Because that is also going to be a
22 moving target. Everyone recognizes that in
23 implementation at the Air Resources Board.

24 So, you know, we have to acknowledge and
25 address these issues. Yes, very complex. Yes,

1 you know, very difficult to work on. But we need
2 to be mindful because we are sending signals to
3 the rest of the world. And we have an opportunity
4 here to maybe, you know, send some very good
5 signals to the rest of the world on how to, you
6 know, approach this kind of policy.

7 MR. HWANG: I'll try to be very brief.
8 I'm going to respond to three different things
9 that I've heard.

10 First of all, to Mr. Cackette's point
11 about 2050. I absolutely agree with his point.
12 2050 has to be extraordinarily transformational.
13 And this leads back to this funding preference or
14 criteria issue that Mr. Smith has on the
15 PowerPoint here.

16 A part of the greenhouse gas reduction
17 requirements as part of the statute, which I know
18 this is not up on the PowerPoint, is, higher
19 percentages in the future -- I'll read it fully --
20 ability to reduce on a lifecycle assessment of
21 greenhouse gas emission by at least 10 percent and
22 higher percentages in the future.

23 We would certainly urge that the Energy
24 Commission start developing a funding preference
25 mechanisms that encourages, incentivizes beyond 10

1 percent reduction. If we had our druthers, 10
2 percent is, from our perspective, clearly too low.

3 But given the urgency of the 2050
4 requirements, I think that the point can be very
5 well made that it's very critical for the Energy
6 Commission to establish a signal upfront that 10
7 percent is not going to be the criteria in the
8 future. Maybe for the first year maybe it's 10
9 percent. But in the future there has to be a
10 signal of criteria for beyond 10 percent
11 reduction.

12 To Mr. Clarke's question about lifecycle
13 assessment, also we are very concerned about that,
14 too, to make sure we get the rules right. I would
15 assume that the 118 process will be harmonized
16 with the LCFS process, which has to be adopted by
17 the end of this year from the Air Resources Board,
18 which obviously has to establish a full lifecycle
19 assessment and grapple with methodology in
20 regulation, and grapple with its -- conversion
21 issue.

22 So we are running in parallel right now,
23 but I would assume that there would be more state
24 policy for 118 to have a different accounting
25 mechanism for greenhouse gas than the state Air

1 Resources Board LCFS program.

2 So I'm keeping my fingers crossed that
3 we do cross the finish line at the same time
4 essentially, and that those two processes will be
5 coordinated. What the ARB is doing is
6 groundbreaking and precedential for not just other
7 state programs, but also nationwide, maybe even
8 internationally.

9 To Ms. Sharpless, your comment about the
10 sustainability standards, what the heck were we
11 thinking, I think was the question.

12 Obviously a very very challenging issue;
13 we've agonized over this quite a bit during the
14 legislative process. However, recent events in
15 the world food supply market, I think, does
16 suggest that we were absolutely right to insure
17 this was incorporated.

18 Whether the legislative process came out
19 with the right solution in tossing this over into
20 the domain of the regulatory agency, in this case
21 the Energy Commission, to establish, you know,
22 that wasn't our preference.

23 However, extraordinarily critical to
24 operationalize this. Again, I'll point back to
25 the low carbon fuel standard. And also I'll point

1 to the renewable fuel standard, federally.

2 It's difficult to figure out how to
3 define sustainability. Sustainability is very
4 broad. My colleagues in Washington, within the
5 renewable fuel standard, have developed minimal
6 what we call land safeguards, or note from the
7 definition of renewable fuels for biomass.

8 Here is a very clear bright line
9 distinction between what is sustainable and what
10 is not sustainable on land safeguards perspective.
11 Is it sufficient? No. And is it necessary?
12 Absolutely. Is it important for us to coordinate
13 between federal policies which will not provide
14 qualification to renewable fuels that do not meet
15 the land safeguards protections at the federal
16 level, it's important to maintain the consistency
17 between California and the federal program, you
18 know, absolutely.

19 And we believe and we are urging the Air
20 Board also to adopt the same minimal set of
21 protections within the RFS, within the LCFS as in
22 the federal RFS. I'm sorry for all these
23 acronyms.

24 Minimal, we have to go further, I think.
25 We look forward to the Energy Commission engaging

1 on this issue. Because I do believe that they
2 have a lot of good resources to look at this issue
3 again. The minimal safeguards are, at best, must
4 be there. There's a lot more we need to be doing
5 in order to establish this sustainability, when we
6 go up to sustainability when it comes to
7 particularly when it comes to the biofuels.

8 So we don't know all the answers yet.
9 But I'm certainly confident we get the right
10 people together in the right room, especially with
11 all the talent here at the Energy Commission,
12 we'll be able to make progress on it.

13 COMMISSIONER DOUGLAS: Thank you,
14 Roland. We have Peter Cooper and then Tom Frantz.

15 MR. COOPER: In order to meet these
16 goals and maintain strong public support, I
17 believe that we have a broad understanding of
18 providing economic benefits, the preference that's
19 on the PowerPoint in front of us.

20 I represent the California Labor
21 Federation with over 2 million members in
22 California. We have members in all different
23 areas of the economy.

24 And as we move forward I think I would
25 just ask the Board to keep in mind that we are

1 seeing drastic labor market volatility currently,
2 as well as demographic changes that will impact
3 the ability to have workers that have the skill
4 sets to perform the work that's needed to be done
5 to meet the goals in AB-118.

6 MR. FRANTZ: Tom Frantz, --

7 COMMISSIONER DOUGLAS: -- I'm sorry,
8 we'll go to you next.

9 MR. FRANTZ: Okay. I'm confronting on
10 the frontline, my group Association of Irrigated
11 Residents, for proposed corn ethanol plants in the
12 southern end of the San Joaquin Valley.

13 And they all claim that they have the
14 blessing of the California Energy Commission and
15 the blessing of CARB to build these plants as part
16 of the low carbon fuel standard, and as part of
17 the reduction in greenhouse gases and so on.

18 They claim that blessing, but I haven't
19 see it in writing. And I'm wondering why it's not
20 in writing if it's true. And if it's not true,
21 and if -- I think we need a priority here of not
22 taking a year or so to study the land use issues
23 surrounding food for fuel.

24 Because these plants are being built.
25 Investments are being made. In just four plants,

1 if you count infrastructure, the cities and
2 counties are providing close to a billion dollars
3 in investment over the next year or so. They're
4 asking city councils and county supervisors to
5 approve these plans without advice from the --
6 without direct advice, certainly, from the Energy
7 Commission on whether this has a viable future.

8 So I hope that this land use issue can
9 be speeded up, and at least a formal word of
10 caution could be put out on these proposals that
11 these things may not be viable, and they may be
12 white elephants in these communities in the near
13 future.

14 Instead of remaining silent, saying we
15 need to do more study, something needs to be said
16 more publicly. And if you are blessing these
17 plants, that needs to be stated publicly, as well.

18 COMMISSIONER DOUGLAS: Tim.

19 MR. CARMICHAEL: Two comments feeding
20 off of what's just been shared by the group. One
21 is, you know, a framework for thinking about this.
22 Obviously it's important for us to pay attention
23 to the language of the law.

24 But California has established goals for
25 climate, for air quality and for petroleum

1 reduction. We're going -- as a group I believe
2 our mission is to help the CEC make the most of a
3 relatively small pot of money. I still think a
4 billion is a lot of dollars, but a relatively
5 small pot of money. Make the most of it to
6 achieve those three goals over the next decade.

7 Mr. Clarke and others, there are a lot
8 of people watching what we do, you know, how the
9 state invests this money. And there's a lot of
10 money that will come -- that will follow the
11 investments here. And some may actually, you
12 know, dwarf this over time.

13 But we have the potential to send a lot
14 of important signals in the near term. And that's
15 my final point. With all due respect to Mr.
16 Cackette and Mr. Hwang, I don't think we have
17 until 2050. And I think we need to pay attention
18 to 2050, and think about long-term impacts of any
19 decisions and recommendations we make.

20 But, if you pay attention to James
21 Hansen and others, you know, they just changed
22 their viewpoint that we had ten years to get our
23 act together, to we have three years to get our
24 act together when it comes to climate emissions.

25 So, near-term action, near-term signals

1 to the broader investment community, broader
2 manufacturing community are critical. And we
3 really need to be thinking about how can we make
4 the most of this, how can we change the world in a
5 positive way with this funding in the near term.

6 COMMISSIONER DOUGLAS: Mike.

7 MR. SMITH: Thank you. The next two
8 slides I'm going to pass over very quickly. They
9 are basically a summation of projects that are
10 eligible in AB-118. You can look at the bill for
11 a far more detailed description of the
12 eligibility.

13 There's one thing I do want to point
14 out, at least on the second slide, is that the
15 bill is very comprehensive in several respects.
16 But in this case it has -- the authors had the
17 wisdom to recognize that creating and transforming
18 a fuel market is more than just putting fuels and
19 vehicles on the road.

20 There is the workforce that's needed to
21 maintain those vehicles, to develop the fuels and
22 maintain the systems that are provide the fuel to
23 the marketplace. So we view this, the workforce
24 training effort, as a very important piece of this
25 overall effort in terms of not only creating the

1 market, but to sustaining it in the long term.

2 I want to get very quickly into steps
3 we're taking now to implement AB-118, and this
4 will lead very quickly into your role as Advisory
5 Committee members and helping the Energy
6 Commission develop the investment plan.

7 We're doing several things at once,
8 trying to move as quickly as we can to implement
9 this program. As has been discussed around this
10 table this morning, there are all sorts of
11 imperatives as to why this program needs to move
12 as quickly as possible, and we need to start to
13 make meaningful advances in meeting climate change
14 objectives that the Governor and AB-32 have
15 identified.

16 The biggest driver in our schedule is
17 the rulemaking we're going through. And I'll
18 speak a little bit about that, but just very
19 quickly, we expect, according to our schedule, to
20 have our regulations published in the spring of
21 '09.

22 A lot's going to be happening in the
23 interim and concurrently, and these are the points
24 that I want to talk about now. We convened the
25 Advisory Committee; this is the first meeting.

1 You're going to be helping us develop the
2 investment plan. And then after the investment
3 plan is developed, we hope to have another public
4 process by which we develop funding mechanisms
5 that we will use to start moving the money out the
6 door in this coming next fiscal year.

7 Just a bit about the regulations. The
8 OIR was released earlier this year at the end of
9 January. The whole point of the regulations is to
10 simply clarify the statute, create certainty in
11 the administration of the program.

12 One thing to keep in mind with respect
13 to the regulations is we only want to do it once.
14 These are things that are developing and
15 implementing regulations, promulgating regulations
16 is an arduous process. Once established, they
17 should -- you want to leave them in place unless
18 there's something extraordinary happens in the
19 marketplace that requires us to go back and revise
20 the regulations.

21 What we will be doing in this rulemaking
22 is to try and find that language that brings
23 sufficient clarity to certain provisions in the
24 bill, but leaves us with enough latitude to
25 actually administer the program over the next

1 seven and a half to eight years of its life.

2 We are hoping to have several workshops
3 starting next month and into August on our draft
4 regulations. The Energy Commission will adopt
5 these regulations in December, and they'll be
6 submitted to OAL for final approval and
7 publication.

8 As I mentioned earlier, we hope that
9 will all occur by spring of '09, in which case
10 we'll be ready to start awarding funds,
11 considering proposals and awarding funds.

12 The Advisory Committee, as the statute
13 requires, is convening -- has been convened to
14 help the Energy Commission develop the investment
15 plan. The statute is very clear about the types
16 of organizations that are to be represented on the
17 Committee, and we think we've gathered the
18 requisite groups and the requisite
19 representatives.

20 We actually went a few steps further to
21 just sort of round out the Committee and bring a
22 complete -- complete the forum to provide as much
23 input to this process as possible.

24 In helping you through your
25 deliberations in this meeting and in subsequent

1 Advisory Committee meetings, we want to keep your
2 input -- at least our intent is to keep your input
3 at a fairly strategic level. We don't necessarily
4 want to get down into specific projects or
5 specific technologies or fuels, but to provide the
6 Commission and Commissioners Boyd and Douglas and
7 the other Commissioners, with enough strategic
8 input that provides for priorities that then the
9 Commission can use some discretion in trying to
10 figure out and assign the proposals -- excuse me,
11 the solicitations that we go out with in the fall,
12 or we propose in the fall and hopefully go out
13 with in the spring.

14 We've made it very clear that folks
15 participating and organizations participating on
16 this Committee are not eligible to seek or receive
17 funding. There's a few exceptions to that which
18 we have outlined in the roles and responsibilities
19 that each of you have received.

20 We anticipate three meetings. Now
21 there's been mention that we might brace ourselves
22 for more than three, but we're at least planning
23 on three to lead us up to the adoption of the
24 investment plan this fall.

25 The first one is obviously happening

1 today in Sacramento. We are targeting July 9th as
2 the next meeting, and August 26th as the third
3 meeting. We haven't put any location; that's
4 something that the Committee and the Commissioners
5 can debate as to whether we want to have them here
6 in Sacramento or locate them throughout the state,
7 perhaps in the Bay Area and in the Los Angeles
8 area.

9 We want to try and, as early as
10 possible, lock in these dates. We don't have to
11 do that today, but we're putting these up there as
12 targets. It's very difficult to try, as we've
13 discovered in the last couple of week, trying to
14 nail down dates and get them locked in.
15 Particularly when we have other organizations,
16 such as the Air Resources Board, that is also
17 undertaking a critical proceeding, and can be a
18 draw on the members' time. So I'll leave that on
19 the table right now. That's something that you
20 folks can discuss either today or at subsequent
21 meetings.

22 The other provisions of the statute
23 require that these meetings be subject to the Open
24 Meeting Act. Transcripts are being made of this
25 proceeding, these meetings. They will be posted

1 on our website.

2 We also stress that in addition to the
3 input provided by each of the Committee members,
4 we are placing a great emphasis on input from the
5 public and from other stakeholders. And with all
6 of that input that the Commission will use in
7 developing the investment plan over the next
8 couple of months.

9 The investment plan, itself, as the
10 statute says, is to determine priorities and
11 opportunities for funding. it also describes how
12 our existing funding will be used to complement
13 other public and private investments, or other
14 public and private sources of funding.

15 The whole intent there is to extend the
16 reach of this program, to make the most use of our
17 money by matching it and using it with other
18 relevant funding sources.

19 We are going to try and have by the next
20 Advisory Committee meeting, based on the input we
21 receive today, and based on the work we've been
22 doing thus far inhouse, we hope to be able to
23 provide you folks with a rough draft of a
24 investment plan prior to the next meeting.

25 It will be something that will be used

1 simply to stimulate discussion. It will be a
2 focal point, a strawman, if you will. But we need
3 to have something in front of you to keep the
4 discussion focused. So we hope to have that in
5 advance of the next meeting. I can't say exactly
6 when, but that's our objective.

7 I've already talked a bit about the
8 first couple of bullets. One thing that we also
9 are going to keep in mind as we develop this plan
10 with your input, is the temporal aspect of the
11 plan. There's several ways of looking at that.

12 Priorities can include near-term funding
13 priorities as well as longer term priorities that
14 might involve more research. Now, we recognize
15 that this program allows us to cover the full
16 spectrum of activities that will be needed to move
17 fuels and vehicles into the marketplace from
18 research out to deployment. And as I mentioned
19 earlier, workforce training.

20 We understand that the focus of the
21 program is on deployment. We may very well, over
22 the years, have some level of research that we
23 would like to fund, and that you folks may
24 recommend be funded. But the emphasis will be on
25 deployment.

1 Our goal is to try and get as many
2 fuels, as many vehicles into the marketplace as
3 possible to meet the objectives of the program.

4 The other aspect is that -- temporal
5 aspect is the program is starting immediately.
6 And so we may be able to take advantage of and
7 move these fuels into the marketplace in the very
8 immediate term, recognizing that the Air Resources
9 Board is doing some very critical work in
10 developing the low carbon fuel standard.

11 It will take several years to unfold and
12 become completely effective. And so we're hoping
13 that recognizing their objectives and working very
14 closely with them at this very embryonic stage of
15 both of our programs, we'll have a very good sense
16 of where they're headed with the standard. And we
17 can then gear the administration of our program in
18 that way.

19 But the key here is we can then start to
20 get these fuels and vehicles into the marketplace
21 in a much sooner timeframe. Your help will be
22 critical in identifying what those priorities are.

23 We've talked, as the discussion
24 unfolded, a bit ago, there's many factors to
25 consider. And the value of having this Advisory

1 Committee is to hear from the very groups
2 represented in establishing the priorities.

3 We hope to have this plan -- well, let
4 me -- the fourth bullet is very critical, as well.
5 In our mind it's not sufficient simply to get
6 fuels and vehicles into the marketplace, but we
7 see this as a very important opportunity to build
8 industries in California.

9 So to the extent that we can use this
10 program to help invigorate, to help stimulate
11 economic development, we may have a renewable fuel
12 industry located here in California or may have
13 industries that build vehicles here in California.
14 That's something that we want to strive for, as
15 well.

16 The statute requires the plan to be
17 updated annually. We want to, for this initial
18 plan, given that we are moving as quickly as we
19 are, we want the initial plan, or at least we're
20 proposing that the initial plan cover the first
21 two fiscal years.

22 So if we have our plan adopted in
23 October, we have solicitation development in the
24 fall and winter of '08 and '09, and be ready to go
25 in the spring of '09, that doesn't leave a lot of

1 time left in the fiscal year 08/09 to encumber
2 funds and develop projects.

3 We're going to move as quickly as we
4 can. We anticipate to be in a position, even
5 though the fiscal year will be truncated for us,
6 we hope to be in a position that we can move and
7 encumber a good deal of these funds, or at least
8 identify the projects from solicitations, and
9 negotiate the projects and have them ready to go
10 for funding.

11 But the key to making this happen will
12 be having the two-year encumbrance period which we
13 proposed in the Governor's budget that will allow
14 us to spill over a bit into the next fiscal year
15 to properly encumber all the funds.

16 Because of that we're proposing that the
17 first plan cover fiscal year 08/09, and then cover
18 the second fiscal year 09/10. And then the plan
19 will be updated annually after that.

20 We think it's also important that the
21 plan be developed, the timing of the plan be
22 developed with a recognition toward legislative
23 budget hearings. So having a plan in place for
24 future fiscal years in advance of legislative
25 budget hearings will allow us, will give us a

1 certain amount of advantage or strength in going
2 into those hearings with a plan that we could
3 present to the Legislature that very clearly lays
4 out the priorities and opportunities that we've
5 identified with the support from this Committee in
6 using the next fiscal year's funding.

7 COMMISSIONER DOUGLAS: Mike, we have two
8 questions --

9 MR. SMITH: Yes. Yes, I'm sorry.

10 COMMISSIONER DOUGLAS: -- before you go
11 on, from Dan and then Tim and then Roland.

12 MR. EMMETT: Yeah, Daniel Emmett, Energy
13 Independence Now. I just have a question, I don't
14 know if it's the right time for an update or
15 question on the budget, but I'm curious.

16 I understand that there's some question
17 as to if and how much will be available in the
18 first fiscal year. And if this is a time that
19 anyone could address that? If it might be less
20 than the, you know, full 120, or half, or even
21 maybe none according to some side of the building.

22 So, if anyone has an answer to that?

23 VICE CHAIRPERSON BOYD: Well, I didn't
24 bring my crystal ball down, Dan. As you know, the
25 Governor's budget, which had to be put together a

1 long time ago, put \$100 million in for this year
2 out of a potential, you know, estimate of maybe up
3 to \$120 million a year. The money doesn't start
4 even being collected until July of this year.

5 At the time the budget was put together
6 the staff was still trying to figure out the
7 timelines involved with implementing this program
8 and processes and what-have-you.

9 State processes are slow and because of
10 the interest in this whole arena, and this
11 project, you know, additional process has been
12 added, such as regulations, which, when we got
13 done evaluating it, turns out that if the sun
14 shone every day and nothing went off track, we
15 could maybe get the regulations approved by March.

16 That doesn't give a lot of time to get
17 moving. But this program, at present, has a two-
18 year encumbrance process, which means that we will
19 have more time after the end of the fiscal year to
20 dip into the monies that are made available to us
21 in loans and grants that would be -- or whatever,
22 the whole spectrum of possibilities that are a
23 product of the investment plan that you'll help
24 guide us to put together.

25 So, we don't look real favorably on

1 those who don't want to put out any money. And we
2 don't look real favorably on those who want to
3 trim the money back beyond the level that's
4 possible. But I know that debate's going on as we
5 speak, and we'll see where it comes out.

6 We're still supporting the Governor's
7 budget as submitted, which is our moral
8 responsibility. And it is possible, were
9 everything to be right, that that kind of money
10 could be utilized.

11 As Tim Carmichael said earlier, it's not
12 a lot of money over the period of years, and we're
13 already losing the better part of the first fiscal
14 year just because in reality we should be having
15 these meetings for the 09/10 investment plan and
16 08/09 ought to have been done by now. That's why
17 we're asking you to help us in this first time
18 around with really two fiscal years.

19 And I don't know if you realize you were
20 conscripted for the life of this program, but you
21 are, because this is a, you know, we need to do an
22 investment plan every year. And that affords the
23 opportunity in looking at a subsequent year.

24 When we start meeting to do 09/10 or
25 10/11 in the not too distant future, you'll be

1 able to look with us at progress against plan on
2 the previous years. We're always open to mid-
3 course, multiple-course corrections if they're
4 needed, as we move along on the project.

5 And I want to get back to something
6 Stephen said awhile ago. A long time ago when
7 some of us were asked for advice and counsel or
8 input on such things as the low carbon fuel
9 standard and, you know, as we were developing the
10 alternative fuels plan, one of the great concerns
11 I had was a then recognition, which was amplified
12 over time, of how unsophisticated we were in
13 recognizing and modeling this whole full fuel
14 cycle analysis, cradle-to-grave, fuel-to-et
15 cetera, whatever you want to call it, process.

16 And how incredibly important the most
17 informed decisions as possible need to be made
18 soon. Because people are going to be investing
19 huge amounts of money. Major decisions are going
20 to be made as to which forks in which roads to
21 take relative to the future.

22 And we could make some terrible mistakes
23 early on and travel a path that proves to be a
24 dead-end.

25 So, I know it's our desire to move as

1 quickly as possible, and not put things off
2 purposely. We'd like to solve it all day after
3 tomorrow. It's just how fast can the experts and
4 the scientists contribute to the decisionmaking
5 models and tools we need. How fast can we put
6 together an investment plan. How open are we to
7 recognizing that what you do today may be out of
8 date the day after tomorrow, but there are
9 opportunities to make course corrections.

10 But we don't have a lot of time. I
11 mean, yes, 2050 is a great vision; 2020 with great
12 goals. And some people are telling us if we don't
13 do something in two or three years we're in a
14 world of hurt. We recognize all those things. We
15 want to move as rapidly as possible. You can help
16 us move as rapidly as possible and collectively
17 make as few mistakes as we possibly can.

18 And I hope we don't get bound up too
19 much in definition. If you didn't see words on
20 the slide it doesn't mean we don't hold complete
21 allegiance to every word that's in the law. I
22 guess in the interest of making things short and
23 sweet, a word or two might get left out. But
24 don't misread that as any intent on our part.

25 In any event, that was a long answer to

1 a short question. But it's not an easy question,
2 either, Dan.

3 COMMISSIONER DOUGLAS: We've got a
4 couple of people with comments. If we could go to
5 Tim Carmichael -- and then Peter Cooper.

6 MR. CARMICHAEL: Two quick comments.
7 One, I think this is a good discussion and it
8 makes a lot of sense to me to approach it for the
9 first two years this way.

10 The second thought, you mentioned
11 earlier that one of the things the CEC's going to
12 have to finesse is funding for -- this tension
13 that exists, using public funds, that could be
14 seen as helping somebody comply with a regulation
15 or pending regulation, that is a hot button issue
16 for a number of us.

17 But that's going to change over time.
18 And I just want to make sure that you are thinking
19 about that. And that's why revisiting this
20 investment plan, whether it's annually or every
21 other year, I know the intention is annually after
22 this if we go with this first two-year approach.

23 Because the landscape will change, not
24 only now or things developing, but how our
25 technologies are developings, how our regulations

1 developing.

2 And I just want to remind the Commission
3 that in developing draft regulations, that that's
4 something that we'll need flexibility for. If
5 you're going to do it one time, which I think also
6 makes sense, to the best of your ability, then you
7 leave the flexibility for other regulations beyond
8 this agency's control changing over time.

9 DR. SWEENEY: Yeah, given that I
10 translate what you're saying is that the
11 investment plan will be a living document that
12 will be evolving over time, there's two resources
13 that probably you can take -- well, at least one
14 you can take active roles now to make sure they're
15 as helpful as possible for your actions.

16 One is the National Academy of Sciences
17 has a study going on at the federal level called
18 America's Energy Future. And one of those panels,
19 I mean it's a humongously big study, one of the
20 panels is alternative liquid fuels. And there'll
21 be some careful look at some of the lifecycle
22 issues, as well as some of the strategic issues
23 that will be employed. And so that study will
24 probably come out near the end of this summer.

25 And then with the overall parent

1 committee coming out sometime late fall. But, in
2 addition, the California Council on Science and
3 Technology has agreed, the Lieutenant Governor has
4 asked CCST to do a study that would follow up on
5 the America's Energy Future study. And doing it
6 very California-specific.

7 So they will be formulating what is the
8 appropriate things to do. You probably can tie in
9 with those resources by active conversations now
10 with Susan Hackwood, who's the head of the
11 California Council of Science and Technology, and
12 Jane Long, who will be taking the lead in
13 orchestrating that study.

14 And I think those will be useful
15 resources that you can use to bring some of the
16 better, some of the top scientific and engineering
17 thinking at the national level and the California
18 level into this process.

19 VICE CHAIRPERSON BOYD: Just a comment.
20 The CCST folks have been talking to us for quite
21 awhile.

22 DR. SWEENEY: Great.

23 COMMISSIONER DOUGLAS: There are --
24 Peter Cooper, John Shears, Bonnie Holmes-Gen, and
25 then Roland Hwang. And I'd just like to quickly

1 say we are running a little shorter on time that
2 we had expected, so I just wanted to remind folks
3 of that as we move through the agenda. Thanks.

4 VICE CHAIRPERSON BOYD: And I want to
5 remind our Advisory Committee members on the phone
6 to jump in, please. It may be more difficult, but
7 the raise-your-hand or whatever Mike said.

8 MR. SMITH: We have un-muted Carla and
9 Patricia, so they should feel free to speak
10 freely.

11 VICE CHAIRPERSON BOYD: So, they're free
12 to jump in anytime.

13 MR. SMITH: And Will Coleman, sorry.

14 MR. COOPER: So, quickly, I just had a
15 point of clarification. I was wondering, it's my
16 understanding that projects may be accepted and
17 could be multi-year. And if with that we require,
18 it would require entities to come back to the
19 Energy Commission and seek re-approval for their
20 project. Let's say it's a five-year project. Is
21 there -- decisions that have already been made
22 regarding multi-year projects and accountability
23 factors.

24 VICE CHAIRPERSON BOYD: I'll take a stab
25 at it, but, Mike, feel free to correct me. I

1 think we're at liberty to approve multi-year
2 projects. But like anything the government does,
3 when it does projects like that, it says,
4 dependent upon appropriation of funds by the
5 Legislature.

6 Now, I would hope that means that over
7 the period of time this program exists the funds
8 will flow, and that will be an easy thing to
9 accomplish. But in government we always have to
10 have the caveat, you know, upon appropriation of
11 the annual budget by the Legislature.

12 COMMISSIONER DOUGLAS: John.

13 MR. SHEARS: I think Roland had his hand
14 up first, but --

15 MR. HWANG: I was just -- so --

16 MR. SHEARS: Okay. Yeah, you know, I
17 support, it seems logical, given the way the
18 timing has worked out, you know, to get a two-year
19 encumbrance from the budget if possible for
20 funding for the next two fiscal years.

21 But again I want to just sort of stress,
22 given that this is our first go-round on this, and
23 given that we're looking at doing an investment
24 plan that's going to fund essentially two funding
25 cycles, that we may want to have more than just

1 the three workshops to make sure that we have an
2 opportunity to fully explore, get as much input.

3 I know we're all very busy and I think
4 of the importance of sort of getting the ball
5 rolling properly on this program, I think we may
6 want to make sure that we have opportunities to
7 fully explore everything. Since this is the, you
8 know, first time that we're getting a chance to
9 visit, actually visit the design of this program.

10 COMMISSIONER DOUGLAS: Okay, Roland.

11 MR. HWANG: Thanks. Commissioner Boyd,
12 I have no doubt that this Energy Commission, your
13 agency, shares the same goals on climate. I hope
14 that the comments I'm offering up are in the
15 spirit of clarification of a very complicated
16 piece of legislation which have a number of
17 nuances and difficult to unpack intent.

18 So, I do hope that it's taken in the
19 spirit. It's not intended at all to suggest that
20 the Energy Commission is not fully engaged in the
21 AB-32 and other climate goals shared by other
22 agencies and by different stakeholders. So,
23 please do accept that clarification.

24 On the issue of the investment plan,
25 itself, Mr. Smith, again in the spirit of

1 clarification, not in the spirit of suspicion, I
2 think that what I'm looking for in the investment
3 plan, kind of getting back to some of the
4 comments, I think is embedded in your slides in
5 terms of what this investment plan -- I mean this
6 is the heart, the core of the obligation of this
7 Advisory Committee. So it's very important, I
8 think, to kind of clarify what might be part of
9 the strawman proposal.

10 Getting back to some of the earlier
11 comments, particularly about climate change goals,
12 also very important, petroleum reduction goals and
13 air quality goals, I would assume that as part of
14 your evaluation of what the investment plan
15 optimal or, you know, what are the comparative
16 benefits of certain technologies and fuels, is
17 that you'll be looking at their ability to
18 contribute in particular to climate change goals
19 in 2020, as well as 2050. Both on a per Btu
20 basis, but also an absolute tonnage basis.

21 So, I think it's very important for us
22 to understand is whether these technologies have
23 the ability to provide maybe near-term, low-
24 hanging fruit type reductions in greenhouse gases,
25 and which technologies are indeed more

1 transformative and critical to attain our 2020 and
2 2050 goals.

3 When you look at it obviously they are
4 just a handful of fuels and technologies that
5 we're looking at. So I think it's very important
6 in terms of an objective evaluation or the
7 investment plan, especially post hoc evaluation,
8 that we do understand critically how the
9 investment portfolio, the ultimate investment the
10 Energy Commission makes here matches up to our
11 public policy goals of 2020 and 2050.

12 So evaluation of ability to contribute
13 has a class of technologies or fuels to our
14 climate change, particularly climate change, but
15 also petroleum and air quality goals. I think
16 it's a really critical part of this investment
17 plan.

18 I think you've done a lot of this work
19 already, thinking about 1007 and AB-2076, I
20 believe it was called. And I think that's very
21 valuable information, and there's lots of great
22 knowledge that the Energy Commission has amassed
23 that will help guide us with the AB-118 investment
24 plan.

25 COMMISSIONER DOUGLAS: Bonnie.

1 MS. HOLMES-GEN: Thank you, Commissioner
2 Douglas. I just wanted to underscore the
3 importance of the investment plan, as kind of
4 following the line of discussion here. Especially
5 with regard to the state budget process, as has
6 been brought up earlier.

7 It is very important that the Energy
8 Commission show how the funds are going to be
9 targeted to make tangible progress forward on our
10 greenhouse gas, air quality and petroleum
11 reduction goals, and the investment plan.

12 And, in fact, I'm sure that you're aware
13 that there is followup legislation that's moving
14 forward that will clarify a little bit more the
15 role of this investment plan. And it would do a
16 little more than just require that the plan lay
17 out priorities and opportunities which we have in
18 the current legislation.

19 Priorities and opportunities for
20 investing this money. But would also clarify that
21 the individual projects must be determined by the
22 Commission to actually be consistent with the
23 investment plan. So there's a stronger link
24 between the investment plan and the project
25 approval process that's envisioned by at least a

1 number of legislators. And, again, I think that
2 just underscores how important this is.

3 And I think in addition to the goals
4 that Roland just laid out in terms of looking at
5 how this plan is going to move us forward toward
6 transformation technologies, it's, I think, a
7 critical job of the CEC and of this body is to
8 help to narrow the long list that I think we still
9 have on the screen, or we just went through, in
10 terms of all the various types of projects that
11 could be funded with this money.

12 And, of course, this bill is designed to
13 look at what might happen over, you know, a period
14 of many years. But, I think a critical role is
15 for this Committee and the CEC to look at what is
16 the most important use of these funds in the next
17 year or two as we're talking about. And to narrow
18 this long list of all the various ways the money
19 could be spent. And to show how we can target and
20 focus in a few key areas to really make a big
21 difference.

22 And I think that is going to be critical
23 to showing that this funding will be spent in a
24 very useful and productive way.

25 So, I just wanted -- I think at some

1 point we need to get to that discussion of how
2 we're going to narrow down and target this money;
3 and what few key areas we can really make a
4 critical difference in the next couple of years.

5 And I think a lot of that -- we also
6 need to get into the area of discussing deployment
7 versus research, too. That's another key area in
8 terms of where this funding should be going.

9 And I think many of us feel that, you
10 know, the deployment area is a critical area that
11 where we need to see some work, or some of this
12 funding spent over the next two years, also.

13 COMMISSIONER DOUGLAS: I think we have -
14 - I think at this point, Mike, --

15 MR. SMITH: The last point I want to
16 make is the activity on soliciting proposals. As
17 I said, the investment plan is going to be -- we
18 recognize the critical nature the investment plan
19 plays in guiding this program.

20 We're hoping to have an investment plan,
21 at least the schedule we laid out has the
22 investment plan being adopted by the Commission in
23 October of this year. Now, that may change if
24 this Committee and the Commissioners decide we
25 want to hold more meetings, that adoption date may

1 alter.

2 It still doesn't change the fact that
3 there will be time between when the adoption --
4 the investment plan is adopted and when our
5 rulemaking concludes with the publication of the
6 regulations in the spring of '09.

7 We still want to be in the position of
8 starting to take the information that is evolving
9 from the investment plan, or that comes out of the
10 adopted investment plan, and begin to develop
11 solicitations and other funding mechanisms for
12 actually soliciting and awarding money.

13 We anticipate, we plan on having during
14 that process, we plan on having some public
15 workshops to engage you folks, engage the
16 stakeholders and the public on the design and
17 implementation of those solicitations. So there
18 will be yet even after the investment plan is
19 adopted, there will be another opportunity during
20 that solicitation planning process to seek input
21 from stakeholders and the public on how we solicit
22 and what those targets ought to be in soliciting
23 for projects.

24 With that, I'll just leave you with the
25 contact information. We have two dockets

1 available; one specifically for the rulemaking
2 regulations; the other for the general program.
3 Into these dockets we're placing all information
4 that we gather. So these dockets will be the
5 basis of the record that we use to decide how to
6 draft the regulations; it'll be the basis of the
7 record that we use in how to design and implement
8 the program.

9 So, with that, I'll open it up for any
10 questions.

11 (Laughter.)

12 VICE CHAIRPERSON BOYD: Let me just
13 inject one thing here. Looking at the agenda you
14 have that we've not been paying a lot of attention
15 to, I would like to presume, if you're comfortable
16 with it, that the last hour and a half plus has
17 really been kind of the second and third agenda
18 item all rolled into one.

19 And so I'd like to ask, again, as Mike
20 just said, any other questions on the slides
21 you've seen on the wall, on the material you were
22 provided when you were solicited to be members of
23 this group, about roles and responsibilities and
24 if there's any concern or confusion.

25 Otherwise we can kind of just go with

1 the flow and recognize that you've pretty well
2 defined what needs to be done, and have a pretty
3 good understanding of what the roles are.

4 And I just want to tell John Shears that
5 we have heard twice, now, your -- and maybe we'll
6 talk about it again on the very last item. You
7 know, we have the conflict between needing to move
8 and move quick and the passage of time brought
9 upon us by lots of process.

10 What I'd really like us to move now to
11 is the fourth agenda item, to have you continue
12 your discussions, but get down into funding
13 sources and any priorities you might want to talk
14 about today.

15 Because as Mike indicated, for our next
16 meeting the staff will voluntarily try to cobble
17 some kind of straw proposal together of what they
18 heard you all say, what we interpret from things,
19 just to have some bones to chew on, or to flesh
20 out when we have the next meeting. And it may
21 well necessitate more than, quote, three meetings
22 during this interim period, because a) we're
23 learning, and b) we're trying to wrap two years
24 into one. But that'll be heavily dictated by the
25 availability of so many of you. But, believe me,

1 we're open to it.

2 So, with that, I'd like to let you
3 finish your questions and try to move on in into
4 Committee discussions with regard to funding
5 sources and priorities.

6 And I want to be sure to draw Mike Walsh
7 out into this discussion, in particular. One,
8 because we're going to lose him at about 11:45,
9 which is almost the end of the meeting; and
10 second, we've dragged him from somewhere in the
11 world.

12 Some of us have known Mike for decades.
13 He is a world renown consultant on vehicle
14 technology, air pollution and what-have-you. And
15 a McArthur awardee, and long-time -- I won't say,
16 -- a long time friend of mine, I know of Tom's and
17 what-have-you. A person for whom I have immense
18 respect. And I would want to be sure and get his
19 point of view on technology and fuels that we
20 should be thinking about.

21 But all of you need to input on that
22 same subject from the standpoints of the expertise
23 you bring to this group, and the knowledge you
24 have, California-specific knowledge, about what
25 the nation-state of California needs to do in this

1 arena.

2 And do -- bless you --

3 (Laughter.)

4 VICE CHAIRPERSON BOYD: Patty, you're
5 getting better? No, I'm not even sure it was you.

6 MS. MONAHAN: That was me, sorry.

7 VICE CHAIRPERSON BOYD: And anyway, to
8 see that, you know, this is a continuous work in
9 progress. We will learn by doing. We will be
10 open to multiple course directions, so on and so
11 forth.

12 And while we're not going to exclude you
13 from anything you want to talk about, I would
14 remind us all to try to stay at -- well, Jan said
15 5000 feet. Maybe we need to be at 20,000 feet, at
16 best, and not get too caught up in detail. We can
17 get caught up in detail of individual grants after
18 you've seen -- or loans, or loan guarantees, or
19 whatever other mechanisms you suggest we follow.
20 You'll be able to give us feedback after we have,
21 you know, a little bit of experience.

22 So, with that, I'll be quiet and throw
23 the floor open to all of you.

24 COMMISSIONER DOUGLAS: I'll also just
25 say very briefly that we are in the process of un-

1 muting the --

2 MR. SMITH: We also have Carla Din and
3 Will Coleman who have questions. So, it's your
4 choice of the order.

5 VICE CHAIRPERSON BOYD: Dan, are you
6 there?

7 MR. SMITH: We thought we un-muted him.
8 His name isn't specified.

9 VICE CHAIRPERSON BOYD: Okay, --

10 MR. SMITH: He may be just calling in --

11 VICE CHAIRPERSON BOYD: -- so you said
12 Carla and --

13 COMMISSIONER DOUGLAS: He says he's on
14 the phone, not the web.

15 MR. SMITH: Okay.

16 VICE CHAIRPERSON BOYD: Anyway, the
17 other two, Carla and Will? If either of you had
18 comments?

19 MS. DIN: I did. Can you hear me?

20 VICE CHAIRPERSON BOYD: Yes, we can.

21 MS. DIN: Great, thanks. The Apollo
22 Alliance looks at the overlap of things like
23 investments, industries, workforce development and
24 jobs creation, as well as community
25 revitalization. And I think it's a great

1 opportunity to achieve that through this process.

2 And Peter Cooper mentioned an interest
3 in workforce training. And I'd like to just add
4 looking at the broad area of public and private
5 investment, and that would include job creation,
6 more economic development and so on, and I think
7 we can especially achieve local economy
8 development through things like reducing local air
9 pollution.

10 Also in AB-32 section 38565, is a
11 provision that requires that public and private
12 investments be directed towards the most of the
13 dense communities in California. So I think
14 that's another area that should be kept in mind.

15 VICE CHAIRPERSON BOYD: Thank you.
16 Will, did you have --

17 MR. COLEMAN: Yeah, I actually just have
18 a question in terms of reaching forward before we
19 jump into this, the funding, which is do we have a
20 clear set of milestones for each of these meetings
21 we need to accomplish in order to put together a
22 final proposal?

23 VICE CHAIRPERSON BOYD: Mike, do you
24 have a clear set of milestones? You didn't
25 exactly throw the timetable up there, but I'm not

1 sure we had milestones on the timetable yet.

2 MR. SMITH: No, I --

3 VICE CHAIRPERSON BOYD: We just ventured
4 into --

5 MR. SMITH: -- Commissioner Boyd is --

6 VICE CHAIRPERSON BOYD: -- this today.

7 MR. SMITH: Yes. Will, Commissioner
8 Boyd is correct. We don't have clear milestones.
9 The end milestone that we have at least planned,
10 which could be subject to change, was to have the
11 final meeting in August. The plan would be
12 adopted in October.

13 We hope to have a draft of the plan in
14 advance, posted in advance of the next meeting so
15 we can circulate it to the Committee members and
16 make it available to the public. So the Committee
17 has something to discuss at the next meeting.

18 Those were basically the milestones that
19 we had envisioned at this point.

20 MR. COLEMAN: I guess it would be useful
21 for me, and I presume others, as well, if we had a
22 sense of what specific -- we have to discuss over
23 that time period. So, funding is one, for
24 example. Criteria for selection would be another.
25 You know, I imagine that there's a whole set of

1 discussions we need to have in order to complete
2 that document.

3 Is it possible to put something like
4 that together for us?

5 MR. SMITH: Absolutely. I understand
6 your point clearly and we'll put together a
7 document that will help guide the discussion at
8 the next meeting.

9 MR. COLEMAN: Okay, thank you.

10 MR. SMITH: Thank you.

11 VICE CHAIRPERSON BOYD: But to do that
12 we're looking for guidance today as to what some
13 of that content might be.

14 Mike?

15 MR. WALSH: Maybe if I could throw a few
16 things out that are on my mind, at least. One
17 goes perhaps to what you were raising, Roland,
18 about the primacy of climate in the legislation.
19 I'm certain we all share the view that climate is
20 the number one priority of all the things we're
21 doing these days.

22 But I no longer see much of a difference
23 between the climate issues and the urban air
24 pollution issues. We're dealing largely with the
25 same pollutants and a lot of interactions between

1 climate and urban air pollution.

2 So it's not even an area of conflict
3 really, but most of the things we're going to be
4 wanting to do with fuels and vehicle technology
5 have to address both of those. And I agree that
6 probably that will also carry along, you know,
7 petroleum replacement as well.

8 Secondly, the whole issue of biofuels is
9 just -- it just seems to me to be getting so
10 complicated. I just came from Europe and the
11 debates that are going on in Europe right now
12 about biofuels are just very very intense. And
13 very hard to see quick resolutions other than by
14 sort of staking out presumptive concerns that on a
15 case-by-case basis can be overcome.

16 By that I mean for biofuels that will be
17 coming from outside a country, to presume that
18 they are going to impact on land use until and
19 unless the provider of the fuel can show that
20 they're not, and not going to have negative
21 impacts. And that's a tough burden, I think. But
22 maybe the realistic way to deal with it. At least
23 that's one prominent option that's in play,
24 certainly in the European scene right now.

25 Tom and I were at a workshop the week

1 before last where an issue I had not thought of
2 before was raised with regard to ethanol, the
3 impact on OBD systems, and some of the
4 technologies that are on existing vehicles, as you
5 go up in the amount of alcohol that's in the
6 gasoline. And that's not a 5000-foot issue
7 perhaps, but another one of these little things
8 that seems to be emerging in the biofuels area.

9 Looking out at the longer term goals,
10 the 2050 type goals, you know, the 50, 60, 80
11 percent reductions, that says to me, and I think
12 to a lot of my colleagues, that we're probably
13 moving away from combustion engines of most types
14 in that timeframe.

15 So, we're looking at electric drive
16 technology of one form or another. Or fuel cells
17 with, or in combination with the real issue being
18 what kind of fuels are used to generate the
19 electricity. And so a question that's in my mind
20 on that issue is, are we looking not just at fuels
21 that are used in vehicles, which in that case
22 would be electricity or hydrogen, but also the
23 fuels that are used to generate the electricity
24 that might be used in the vehicles.

25 So, a couple of observations. Thank

1 you.

2 VICE CHAIRPERSON BOYD: The last point's
3 a very good point, Mike. All your points are good
4 points, the last point sticks with me because this
5 agency, you know, through different programs, is
6 striving to clean up, to make more clean the
7 California electricity generation fleet.

8 California is blessed with a relatively
9 clean fleet of generation. California
10 acknowledges that it imports about 25 percent of
11 its electricity. Most of that is generated by
12 coal. California has stated a policy of wanting
13 its future contractual obligations for out-of-
14 state power to be generated by something as clean
15 as a combined cycle natural gas plant.

16 All of this in the context of a
17 renewable portfolio standard that says we want,
18 you know, 20 percent renewables by the year 2010
19 in our electricity mix.

20 But it's hard to pull the plug on that,
21 and the subject you broach. This agency, in its
22 2005 Integrated Energy Policy Report, made the
23 hard call that has turned out to be a correct
24 call, that plug-in hybrids would play a very large
25 role in our future. We invested \$3 million in a

1 research center at UC Davis on the subject. Now
2 everybody's got religion on plug-in hybrids. And,
3 yeah, that's going to be part of the future. And
4 it's a good question as to how to bring that into
5 this equation.

6 Another comment on something you
7 mentioned about biofuels, which is if we're going
8 to draw a circle of all the various programs and
9 what-have-you, the biofuels plan in California has
10 to be one of the intersecting circles here.

11 And the international debate that we
12 follow closely, suddenly reminded me, and maybe
13 somebody has some ideas, we almost need third-
14 party certification of what foreign governments or
15 industries are claiming with regard to that.

16 Because the Malaysians have been here,
17 the Brazilians have been here many times, claiming
18 we're not doing any of those things, don't worry.
19 Any of the biofuel blending agents or ethanol, in
20 particular, come from sources where we're doing no
21 harm.

22 I find it hard to believe that. But
23 these are, you know, this is the government of
24 those countries, so --

25 MR. CLARKE: That actually speaks

1 exactly to the point I was making earlier. I'm
2 watching fast money go abroad to clear rain
3 forests, to build bioethanol plants on the
4 presumption that there will be a high ethanol
5 standard in California.

6 And there's a presumption that there
7 will be a market. And there's a presumption that
8 there will be no audit for what it came from. And
9 it speaks exactly to the point I was trying to
10 raise earlier about -- raising earlier, is that
11 it's about having a transparent lifecycle analysis
12 of it.

13 I'm looking at some of the
14 recommendations in here. I'm not going to speak
15 to specifics, but we spend a lot of time in my
16 organization doing lifecycle analyses of the whole
17 soup-to-nuts. And there are some fuel options in
18 here that wouldn't cut it really if you look
19 seriously at the lifecycle analysis.

20 Speaking to Michael, BMW famously
21 rejected the principle of a fuel cell because
22 currently they can run a V8 on hydrogen with
23 better efficiency than you can generate
24 electricity from a fuel cell.

25 And this is a company that's privately

1 funded. And has to survive on selling product
2 into the marketplace. And they just said, forget
3 fuel cells. In 2050 or any other time in the
4 future, we'll never get a fuel cell to the cost
5 performance point that we can already get to by
6 burning hydrogen in a V8.

7 And I think one of the issues is there
8 were some comments earlier about the world looks
9 at California. Actually, California needs to look
10 at the world. There's a lot of stuff, a lot of
11 legislation, a lot of things that got harmonized,
12 rightly or wrongly, around Kyoto that provided
13 standards that the rest of the world, of those who
14 bothered to sign it, can look at as a language for
15 holding these debates.

16 And we're in isolation here, thinking
17 that we lead the world, when, in fact, we don't.
18 And it's really sad.

19 MR. WALSH: I think on your first point,
20 and really is what you're raising, I think, Jim,
21 when you have government officials come from some
22 of these countries attesting to, well, we're not
23 doing this, this or this, how do you verify that.

24 And certainly everything I hear about
25 what's going on in Malaysia is that bad things are

1 going on in Malaysia in terms of land use.

2 And finding a way to independently
3 verify, especially with these biofuels, where
4 they're coming from and how they're produced, and
5 what the land use impacts are, all of the indirect
6 impacts that you raised, I think are just very
7 very difficult issues. And have immense
8 consequences for the goal that we're all trying to
9 achieve.

10 So, sooner rather than later we have
11 to -- you have to come up with a strategy, a plan
12 for how you're going to deal with that.
13 Otherwise, the risk of very bad investments is out
14 there.

15 On the fuel cell issue, I had the
16 opportunity, with support from the Air Resources
17 Board, to participate in a commission or a group,
18 advisory group, last year that visited all the
19 major manufacturers. And certainly that was BMW's
20 position.

21 But a number of other major
22 manufacturers are investing very very heavily in
23 fuel cells, and are very optimistic about the
24 outcome of that investment, recognizing that they
25 all agree that there are still some hurdles to be

1 overcome. But many of them are very optimistic
2 about that.

3 MR. CLARKE: There are some fundamental
4 laws of thermodynamics that are not possible to
5 overcome, and that's BMW's point. There is a
6 certain amount of energy that's lost when you make
7 hydrogen. It's incredibly inefficient to
8 manufacture. It's difficult to store. And the
9 heat management load of the fuel cell is far
10 greater than that of a gas engine.

11 So, I'm with BMW on that one. But I'm
12 certainly with electric vehicles and other things.

13 I think -- there's a challenge here
14 which is that, you know, if we want the world to
15 take a lead from California, I think one of the
16 most powerful things that we could do, as a state,
17 is to set that gold standard, and say, we will
18 require a full audit of the soup-to-nuts lifecycle
19 of the fuels that we burn in this state. And set
20 that standard; rise to the challenge.

21 And if we, you know, it's one thing for
22 a town in California to say we're not going to
23 import fuel from XYZ; it's something entirely
24 different for the California Legislature to say we
25 really do believe in sustainability; we really do

1 believe in CO2. And we're going to make sure that
2 the stuff that we burn as ethanol is actually
3 generating the net reduction in CO2, not a net
4 increase in CO2.

5 COMMISSIONER DOUGLAS: John?

6 MR. SHEARS: Yeah, I'd like to just echo
7 Mike Walsh's comment in that we really need to
8 think within the course of this, again, seven and
9 a half year program of the entire energy system.

10 And where, you know, I think there's a
11 general consensus that is indeed evolving, that
12 Mike is referring to, and that we're looking
13 towards moving the tailpipe to the power
14 generation station.

15 There we have, you know, dealing with
16 the emissions controls, which can be much more
17 highly efficient at the power generation station.
18 So, you know, that's going to be very difficult to
19 do, but I think through the work of this program
20 we should also keep in mind that if this program
21 proves to show some success, that it's very likely
22 that the Legislature would like to adopt a more
23 ambitious version of this program. That is a
24 possibility.

25 So, there are some real opportunities

1 here, but again, I'd just like to echo that we
2 should be mindful, you know, transportation is the
3 heart of the larger energy system. The arc of
4 technology paths may include quite a bit of, you
5 know, electrical and hydrogen and energy
6 efficiency issues in terms of things like the
7 energy balance between hydrogen and that's not
8 always the logical reason for why certain
9 technologies are used a lot of times. Again, it's
10 because of things like convenience, and what the
11 technology can ultimately deliver.

12 So, it's an issue that's debated very
13 much outside of this Committee.

14 COMMISSIONER DOUGLAS: We've got Jim,
15 and then --

16 DR. SWEENEY: Going back to my point
17 about the indirect effects. I keep hearing people
18 say we've got to look at the effects of the fuels
19 we import, of where it came from.

20 And the important thing about the
21 indirect effect is whenever we're substituting a
22 foodstock, corn in particular, to become a
23 feedstock for fuel, every bushel we do of that is
24 typically a bushel that then, at the margin, is
25 not exported or not available for use elsewhere.

1 And that means that there's another
2 bushel of equivalent that is being farmed
3 elsewhere.

4 To a large extent that means conversion
5 of forestlands to croplands. And it's that carbon
6 debt that we're giving up by that conversion that
7 really becomes overwhelming for those uses of
8 ethanol in which we're converting foodcrops to
9 ethanol.

10 Now, as opposed to degraded land where
11 we're using waste products or other biomass, the
12 argument doesn't hold in the slightest.

13 So I think that we've got to really
14 carefully differentiate between those. Where that
15 gets me to is hopefully second along this line is
16 then we ask about what's going on in the
17 cellulosic ethanol. And there's a tremendous
18 amount of research that is already going on there.

19 So, it suggests to me that maybe where
20 this organization should focus their attention is
21 in two years efficiency of use of vehicles,
22 electrification either through fuel cells or
23 battery electrics or hybrids or any of those. And
24 then the possibility of hydrogen, whether it is
25 internal combustion or fuel cell. You know,

1 there's a debate going on and different companies
2 are investing in different places.

3 And stay away from a lot of the ethanol
4 sources because I think we'll have fewer bang for
5 the buck in terms of moving forward in those
6 technologies.

7 COMMISSIONER DOUGLAS: I've got a list,
8 Jan Sharpless, Dan and then Patty Monahan on the
9 phone. Is there anyone else?

10 MS. SHARPLESS: Okay, well, I couldn't
11 disagree with what Jim or what Mike or John said
12 already about focus. But I would add in a
13 perspective when you're talking about
14 electrification and California's drive for clean
15 sources.

16 Because California, of course, is not
17 the only state that's driving toward clean
18 sources. And when you look at the feedstocks that
19 people are considering as clean sources, you have
20 to look at the sustainability of those feedstocks.

21 For instance, natural gas, you're
22 looking at natural gas as part of an additive to
23 biodiesel. You're looking at natural gas as a
24 feedstock for fuel cells. You're looking at
25 natural gas as part of your, you know, of your

1 cogeneration facilities. And natural gas for just
2 plain transportation fuel.

3 As people start using these different
4 applications we have to look at where the
5 competition and the drive points and the cost
6 points are going to be. So that, you know, it's a
7 big picture, I guess is what I'm saying. And as
8 we focus on perhaps the investment portfolio, we
9 have to see how these things interplay. Number
10 one.

11 Number two, in terms of the electric
12 system, central versus distributed. You know,
13 we're basically a central system in the United
14 States. We're not distributed. And we're
15 interconnected, especially here in the west, with
16 provinces in Canada and the territory in Mexico,
17 and about 13 states. So we're all connected in
18 this system.

19 So when we talk about fuel sources and
20 going to cleaner fuel sources, such as wind and
21 such as solar, which I think is terrific, and
22 which I think is where we're being driven, you
23 have to look at the implications on the delivery
24 system.

25 I often hear just, you know, let's get

1 all our sources clean, let's get our windmills
2 going, let's get our solar systems going, let's
3 get our cogen going, combined cycle going. But
4 you got a distribution system that was designed
5 for a different set of physics. And they're
6 struggling. They're struggling really hard to
7 figure how they're going to deal with all this
8 stuff coming down.

9 And as you know, there's already
10 concerns about the reliability of the system and
11 the type of investment that we need to invest in
12 order to keep the system to hang together.

13 So, I would just have you add that
14 perspective when you're talking about, you know,
15 fuel sources, and when you're talking about the
16 electrical grid.

17 MR. EMMETT: Yeah, thank you. I just
18 want to make a couple of points, building a little
19 bit on Jim Sweeney's comments about how to focus
20 in those key areas.

21 I'd also say that, you know, something
22 key to look at in terms of state policy
23 initiatives is a list that we saw up on the
24 screen. I mean maybe this one's one that's been
25 around so long and so battered that it didn't make

1 the list.

2 But a key policy initiative, and this
3 gets into the area of whether or not this funding
4 can support things that are already required by
5 law, already under regulation. And I'd argue that
6 in some cases yes, that's going to be key.

7 And if we look at the California's zero
8 emission vehicle regulation program, that's
9 something that we need to think a lot about in
10 terms of how this funding dovetails.

11 Obviously Mike Walsh was part of that
12 advisory panel that traveled the world, and made
13 some determinations about the technology, about
14 where things stand. And everyone was very
15 involved, and many people around the room involved
16 in that process.

17 And out of that has come, or is coming,
18 it's not finalized, I guess, but some direction
19 about vehicles and fuels and technologies. And we
20 want to make sure that we get to that, we get to
21 those and go beyond that.

22 And I think it would be important for
23 this investment plan to reflect what's gone on
24 there, and support achieving what's going to be
25 required under that regulation.

1 So, hopefully the timelines will work
2 out. We've got a relatively good idea about
3 what's required, going to be required in the next
4 round of the 2012 to '14 timeframe, which is very
5 much in the timeframe we're all concerned about
6 with vehicles and beyond.

7 So, I guess I'd like some clarification
8 about what we feel -- where we feel we're
9 constrained in how this money can be spent in
10 supporting the kinds of technologies that are
11 going to be required under that regulation, such
12 as fuel cells and plug-in hybrid vehicles.

13 It's going to be key to support those
14 technologies. I think this funding should go to
15 support that. But if there's some provision that
16 doesn't allow for some aspects of that I think we
17 need to know that.

18 COMMISSIONER DOUGLAS: Okay, we've got
19 Patty, Roland and then John Shears.

20 MS. MONAHAN: Hi, thanks. Patty. Well,
21 first I want to voice my support to something
22 Commissioner Boyd said at the very beginning about
23 how this program is -- what we need to look at in
24 more of a buckshot approach. Where we don't pick
25 winners and invest the majority of the resources

1 in certain technologies. We need to really, I
2 think the extent of our view is to look for
3 (inaudible).

4 And at the same time I think we also
5 need to target these monies where we'll have some
6 certainty of the benefits that we're achieving.
7 Because that goes to what Mike Walsh was talking
8 about in terms of, you know, there's a lot of
9 debate right now about the indirect impacts from
10 biofuels production.

11 And I think biofuels offers tremendous
12 opportunities, and also high risk. I don't think
13 that in the next two or three years we're
14 necessarily going to resolve the questions about
15 indirect land use. I view this as an area that
16 for many years, perhaps decades, we're going to be
17 continuing to debate how the changing price, or
18 the increasing price pressure from biofuels upset
19 planned conversion in other parts of the world.

20 This is, I think, because we're just
21 seeing the first studies coming out. We're going
22 to, I'm sure, see a lot of competing information
23 from the different full economic models out there.
24 So I am concerned that particularly where fuels
25 that have -- are used for food as well as

1 biofuels, as well as other purposes, to have these
2 price pressures and indirect land use shifts as a
3 result of that.

4 I'm concerned that we're not going to be
5 able to, in the near term, accurately account for
6 those. I think we're seeing, you know, the corn/
7 ethanol debate. There's just been such a wide
8 range, either very optimistic or very pessimistic
9 assumptions about what the impacts are of corn
10 ethanol. I think it will continue for many years.

11 The question for imported fuels as to
12 how can we actually verify the greenhouse gas
13 effect is a critical one. And that's why I think
14 in some way we have a unique opportunity with the
15 AB-118 funds to focus on the fuels that have the
16 fewest uncertainties. And that's to be able to
17 track where the greenhouse gas impacts. At least
18 at the facility and at the feedstock level,
19 accounting for all the greenhouse gas impacts in
20 all lengths of the fuel supply chain.

21 So I would urge us, as a group, to think
22 about ways of constructing this program so that we
23 get some accurate information feeding into what
24 the greenhouse gas impacts are, actually helping
25 CARB as it -- the low carbon fuel standard, to

1 develop tracking mechanisms to accurately account
2 for lifecycle.

3 Thanks, that's all I have to say.

4 COMMISSIONER DOUGLAS: Thank you, Patty.
5 We'll go on to Roland.

6 MR. HWANG: Thank you, Commissioner
7 Douglas. On this issue of focus versus technology
8 or fuel neutrality, it's obviously a balancing
9 act. And I do want to put my thumb on the scale
10 towards the need to focus. Because in our goals,
11 our 2020 goals, in our 2050 goals, the subset of
12 technology in fuels that we need to achieve our
13 climate goals here in California hopefully soon in
14 the future, and nationally, is, you know, vastly
15 winnowed down from what we've, you know, could
16 have conceived 10 or 20 years ago.

17 So, I think there is a focus here which,
18 from our analysis, there's clarity in terms of
19 where we should put our resources on.

20 Now, when it comes to transportation we
21 obviously have, you know, the so-called three-
22 legged stool. We need to improve vehicles that
23 run on gasoline or diesel, that's, you know, the
24 AB-1493 program, at least for light duty. We need
25 cleaner fuels and we need VMT reduction.

1 The focus of this program, obviously, is
2 both at that first bend, that first leg and a
3 second leg. But particularly when it comes to the
4 second leg, cleaner fuels, we will need every
5 clean fuel we can get. And we need those fast.

6 There are, from our analysis, three
7 different potential sources. Electricity from a
8 clean grid or increasingly decarbonized grid. For
9 success on greenhouse gas caps in this country,
10 the grid will have to go to near zero emissions by
11 2050, which will enhance the benefits of plug-in
12 hybrid or pure battery electric. So that's one
13 clean fuels.

14 A second would be some sort of biomass-
15 derived, likely liquid fuel, but possibly gaseous
16 fuel like hydrogen. So the second one obviously
17 has been the subject of a lot of discussion here.

18 The third is obviously hydrogen which
19 can be sourced from clean electricity, sourced
20 from biomass.

21 Now, all three of these we have to work
22 on, in my opinion. And the second one, the
23 biofuels one, obviously is a huge challenge for us
24 for how to figure it out. And we have to set the
25 right policies.

1 But it's very important, I think, not to
2 throw out biomass-derived fuels in this set.
3 Because if you throw out biomass-derived fuels,
4 you have a huge challenge in terms of what you're
5 going to do in order to replace potential
6 reductions for that source.

7 Now, biomass-derived fuel can either be
8 a petroleum-like substance, or it could be ethanol
9 or it could be, you know, some other type of fuel.
10 But the key is that biomass has to be derived from
11 a sustainable -- in a sustainable manner, and it
12 has to produce extremely low carbon.

13 So when you look at that, there are
14 certain sources which do rise to the top, which
15 are low risk when it comes to the environment,
16 albeit risk in the economic and technology
17 dimensions, but low risk when it comes to the
18 environment, such as agricultural waste, as
19 Commissioner Boyd raised earlier.

20 There are also ways to integrate cover
21 crops into agricultural practices. You know, the
22 key here is that there's way to source biomass
23 that is a much much safer, obviously no technology
24 has zero risk, but much much safer in terms of
25 inducing these kinds of land use conversions,

1 which we're all very concerned about.

2 So what I would recommend that we keep
3 the basket as wide as possible, but narrow it down
4 to those three key fuels which I just spoke about.
5 But also in particular on the biomass one, we do
6 know what I'll just term, you know, it's kind of
7 in a simplistic manner, a gold standard biomass
8 sourced feedstock.

9 Narrow it down to those kinds of fuels
10 where we want to emphasize our investments in, you
11 know, in the public dollar space. And I think
12 that, you know, that will enhance our chances for
13 success.

14 COMMISSIONER DOUGLAS: Thank you,
15 Roland. We've got John Shears, Jay McKeenan and
16 Tim Carmichael. And then Will Coleman who is on
17 the web.

18 MR. SHEARS: Yeah, I just want to
19 clarify that I wasn't throwing the baby out with
20 the bath water when I made my earlier remarks.
21 What I said was we need to recognize the arc where
22 transportation is going.

23 And what I was trying to support was
24 Mike Walsh's, you know, point about looking at
25 transportation as part of the energy system. As

1 far as the grid goes, I mean any realistic and
2 plausible deployment for plug-in hybrids, battery
3 EVs, fuel cells with electrolysis, which comes
4 with definitive energy efficiencies, you know.

5 Those rollouts are not expected at the
6 rates that they're expected put a lot of strain on
7 the grid. However, everyone, I think, that works
8 on utilities issues recognizes that the grid is
9 going to have to be willing to change as we go
10 forward.

11 I know the Energy Commission has been
12 funding a lot of research to look at what, you
13 know, what a future grid could look like,
14 including a lot of DG sources. Tends to make
15 scheduling for the CA-ISO quite challenging.

16 So I just want to echo that I'm not
17 saying that we should avoid considering other
18 transportation fuels or technologies outside of,
19 you know, electric drive or hydrogen.

20 MR. McKEENAN: Jay McKeenan, CIOMA. I
21 think that one of the issues that we confront is
22 if you want to do something quickly and you have a
23 system that's evolved on a fuel, liquid fuel
24 distribution system, you start switching over to
25 something else, there are huge investments, huge

1 energy investments that need to be made in terms
2 of realigning that distribution system.

3 So, again, I think it's good that people
4 ar recognizing that liquid fuels has to be part of
5 this discussion.

6 Just something from a fuel distributor's
7 viewpoint in terms of how the low carbon fuel
8 standard is emerging, I guess is the correct term.
9 But, you know, it appears to us, as fuel
10 distributors, that there is a desire to put a
11 variety of different fuels out there with
12 different carbon footprints. And somehow let the
13 market decide on which is the best fuel.

14 But that implies that there will be a
15 number of fuels in the system all at one time.
16 And our system is built on a homogenous fuel being
17 distributed all at one time through the system;
18 not on a variety of fuels being distributed to
19 various points.

20 So that's just something to keep in mind
21 that as we talk about the differing footprints of
22 fuels, at some point there's going to have to be
23 some consolidation or recognition that one or two
24 of those fuels are the fuels that are going to be
25 used.

1 Either that, or again we have to get
2 into the whole redesign of the distribution
3 system, into a whole lot of storage tanks and a
4 whole lot of pipelines. And ultimately a whole
5 lot of trucks taking that fuel around to different
6 locations.

7 COMMISSIONER DOUGLAS: Thank you. We've
8 got Tim Carmichael and then Will Coleman.

9 MR. CARMICHAEL: I participated in a
10 conversation recently with a few people in the
11 room, including CEC and ARB and some of the
12 legislative staff. We were talking about what
13 qualifies and what doesn't.

14 And this is a bit to Mr. Dan Emmett's
15 questions about, you know, where are we going with
16 this and what's okay, what isn't, for funding.

17 A couple of notes that I have from that
18 I thought I'd share real briefly, I think might be
19 helpful to move the conversation along.

20 There seem to be, you know, consensus
21 among the group, and this is including the
22 agencies that were represented there, that we
23 really need to ask the question, is there -- we
24 need to ask, is there a real need for X, whatever
25 it is we're considering funding.

1 Because there are so many different
2 ideas out there, there are other funding sources
3 out there. Is there a true need for whatever
4 investment idea we have before us in this group.

5 A strong desire to emphasize deployment
6 as opposed to R&D. And I personally think that
7 that's a priority. There seemed to be consensus
8 that consumer incentive money, that is helping an
9 individual or fleet buy down the cost of the
10 vehicles that they would be using would be fine,
11 both under this legislation, but also under
12 legislation that's being considered to clarify
13 some of the language in this bill.

14 But there was also a point made about
15 limiting those consumer incentives to truly new
16 technology. And what was discussed in that
17 meeting were battery electrics, fuel cells, plug-
18 in hybrids.

19 And distinguishing those from let's say
20 a Prius vehicle today, which is, you know, new by
21 some standards, but not as new a technology, and
22 not as much in need of a buy-down as those
23 examples I just gave.

24 And the final point I want to share
25 which I think is interesting, given the CEC's

1 scope or potential scope for using this money, is
2 that today California does not have any regulatory
3 requirements for infrastructure that would impede
4 investment through this program. But that could
5 change.

6 And so I think that's something that we
7 need to continue to consider as we're thinking of
8 ways to divvy up this pot of funding, especially
9 in the first two years.

10 Finally, I want to say that I agree both
11 with Roland and what Mr. Clarke said about
12 priorities, as well as Mr. Sweeney. I had one
13 question of clarification. Professor Sweeney
14 mentioned efficiency as a priority. And I agree
15 with that conceptually.

16 But I'm not, in my head today, clear how
17 we could best use some of this funding to
18 accelerate improvements in efficiency in the near
19 term. And I put that out to the group and
20 specifically Professor Sweeney.

21 DR. SWEENEY: I don't have a clear
22 answer about what are the things that we can do,
23 but here's some arithmetic we can start looking
24 at.

25 If you move the average fuel efficiency

1 of the vehicles, as we're doing in the new CAFE
2 standards and under the -- and presumably under
3 the Pavley bill, CAFE standards will almost double
4 the fuel efficiency of all vehicles in the United
5 States. Not a hundred percent, but almost
6 doubling it.

7 That cuts in half the carbon dioxide
8 emissions. If you go to a 10 percent cleaner
9 fuels that only cuts it down 10 percent. So that
10 the leverage that you can get from anything that
11 makes the whole stock of vehicles more fuel
12 efficient is tremendously more powerful, although
13 not necessarily as quick, as what you can get from
14 changing the fuels.

15 So, first, if we can do something with
16 fuel efficiency. Second, we've seen in
17 hybridization, at really a modest extra cost,
18 there's a very significant reduction in the total
19 amount of fuel that you need without having to
20 change over the infrastructure of fuels. And that
21 makes a lot of difference.

22 So, while we may argue that the
23 hybridization is old technology now, well,
24 actually much more aggressive moving in that
25 direction probably gives you more bang for the

1 buck.

2 Second, I think we can't forget that
3 there are not just light-duty vehicles, but
4 there's heavier duty vehicles. And heavy-duty
5 vehicles, how much they idle, where they idle,
6 whether you can electrify truckstops, things like
7 that all are part of the action, too, that we can
8 probably have some difference that goes beyond the
9 incentives currently in the newly reformed CAFE
10 standards at the federal level.

11 So I don't have any complete answer, but
12 I'm saying don't forget those things that just
13 pure fuel efficiency, rather than this sort of
14 excitement about changing over the fuels,
15 themselves.

16 COMMISSIONER DOUGLAS: We have Will
17 Coleman and then Carla Din, both on the phone and
18 web. And then Peter Cooper.

19 MR. COLEMAN: Thanks. I just wanted to
20 echo some of the comments that Roland had made,
21 and others, that I do think we need to cast this
22 net as broadly as possible.

23 It seems to me that the challenge that
24 we face is ultimately simply a selection
25 challenge. Which is how do we set about a number

1 of different criteria that we can use to choose
2 say the optimal solutions, or the optimal places
3 to put funds that are available.

4 And in doing that I think the biggest
5 challenge is a lack of certainty around how to
6 evaluate those. You know, it seems to me that the
7 main thing we're striving for is really a ratio of
8 sort of dollars to impact.

9 And that impact, you know, the
10 denominator of that equation is really, you know,
11 the set of four different criteria that I think
12 people had mentioned.

13 So, we have, you know, carbon
14 reductions, we have air and water quality, we have
15 petroleum reduction and we have economics. And,
16 you know, there may be others that people would
17 want to add, but it seems to me that the challenge
18 is going to be how do we set about having a
19 selection process that can be run fairly
20 efficiently; and that can create some sort of
21 transparency for applicants. At the same time
22 maximize that impact.

23 And I think that Roland's other point
24 earlier about timeframe is an important one. We
25 also have to figure out how to set criteria that

1 allow us to evaluate all of these on different
2 timeframes. Because some of them may be unlocking
3 significant reductions in the future, but not now.

4 And so, you know, one thing I would
5 suggest is that we do have some standards for
6 these things. You know, we could probably spend
7 the next, you know, three meetings plus debating
8 the relative merits of each of these individual
9 solutions, and how to evaluate them.

10 But I think that we may be able to come
11 to some agreement on what the lifecycle analysis
12 standards are that could be used, or what the
13 economic analysis standards are that could be
14 used. And it may be valuable to create some sort
15 of scorecard in this group where we do agree on
16 some set of standards for each of those
17 categories. And how we want to score each of
18 those categories. How we want to weight each of
19 those categories to provide some way of evaluating
20 each of these individual solutions going forward.

21 COMMISSIONER DOUGLAS: Thank you.

22 Carla.

23 MS. DIN: I actually didn't raise my
24 hand. I'm --

25 COMMISSIONER DOUGLAS: I'm sorry, --

1 MS. DIN: -- not sure what popped up.

2 COMMISSIONER DOUGLAS: Okay. Very good.

3 We'll go on to Peter Cooper.

4 MR. COOPER: I just wanted to comment a
5 little bit that I believe the extent to which some
6 of these investments can be used to reach what
7 Phil Angelides has called a double bottomline
8 would benefit the state and also the program in
9 garnering public support.

10 Regarding the workforce training, I just
11 had five criteria that I would suggest for
12 discussion at a later point. You know, I feel
13 like if money is going to workforce training, then
14 money is going down into the communities and will
15 be helping to strengthen support for this program.

16 Criteria could include programs with
17 career pathways, programs with good wages and
18 benefits. This is how we view some of the -- the
19 definition of sustainability of good jobs. That
20 also gets to the issue of jobs that are in
21 companies that will be around, sticky industries,
22 as we call them. They are globally competitive,
23 likely to be around for the distant future. And
24 not just for a few years.

25 And also, lastly, we believe it's

1 important that labor/management partnerships in
2 these training programs are given priority,
3 including consultation with labor unions and
4 workers to make sure that the training really
5 achieves what it sets out to do.

6 So these are just some suggested
7 criteria for the workforce training part of the
8 program which we can discuss in future meetings.

9 COMMISSIONER DOUGLAS: Thank you for
10 that. And just a warning to people on the phone.
11 In our efforts to un-mute Dan Kammen we un-muted a
12 number of other people, as well, because we
13 couldn't tell who he was. So if you're on the
14 phone -- Tim.

15 MR. CARMICHAEL: Just to lead off of
16 Peter Cooper's comments, one of the things I
17 forgot to mention earlier is I really think this
18 investment in workforce training is an important
19 component. And the signal that it sends is really
20 critical, not only to the investment community,
21 but the business community, but also to youths.

22 And there's a lot of buzz about this
23 topic, jobs and means different things to
24 different people in the Capitol. But I think
25 there's 10 or 12 bills that are moving through the

1 Legislature in some form along these lines. But
2 none of them have been passed into law yet. And
3 it's not clear that any of them will be, even
4 though there's a lot of interest. We just don't
5 know that yet.

6 And I just think that this, our
7 investment plan should include some carve-out or
8 investment in that training sector. And there may
9 be an opportunity for that money, you know, in
10 partnership with, you know, community colleges or
11 some business group or some other agency in the
12 state government.

13 But I think it has a lot of potential
14 ripple benefits. Even if it's a relatively modest
15 investment, it's a clear signal that this is a
16 priority or important. It's also important to
17 achieving our bigger goals.

18 MR. EMMETT: Thanks. Just a couple
19 quick points regarding the stated goals of
20 deployment and immediacy. One of the things that
21 we might be able to suggest for the strawman for
22 folks in the investment plan is on programs that
23 already exist that can be either other state
24 programs, or institutional entities that are
25 already geared up, ready to go, received the

1 funding and start deploying these technologies.

2 So I think we can all be thinking about
3 what those are, and suggest some of those so we
4 can get this money on the ground running quickly.

5 The other thing is to design -- well, we
6 really need these important criteria to determine
7 where our priorities are funding. We want to make
8 sure that in terms of the implementation of how
9 this money gets out there, that it's put together
10 in a way that doesn't keep people from coming to
11 the table.

12 So we've seen government funding before
13 where there may be strings or onerous challenges
14 that make, you know, the private sector step away.
15 So while we need these really clear criteria, and
16 I'm not suggesting that, you know, I'm purely
17 speaking of administrative challenges that maybe
18 we can streamline, but we clearly need the
19 criteria that we all care about in terms of the
20 kinds of fuels and technologies we need.

21 And I guess those were my two points.

22 VICE CHAIRPERSON BOYD: Thanks, Dan. I
23 quickly want to say something. It's been
24 mentioned already that the Energy Commission and
25 the ARB in the alternative fuels plan did push the

1 idea we need a diversified portfolio of fuels,
2 i.e., that's the no-silver-bullet, silver
3 buckshot.

4 And to me we have to look at a bridge
5 from today to this future we're talking about.
6 And there may be some other fuels that are more
7 readily available that we haven't talked about,
8 such as natural gas. I know it's a fossil fuel; I
9 know it's got some carbon in it.

10 But we would ask you to think about
11 other fuels that are part of the transition if you
12 want to address lowering carbon and address
13 getting off of petroleum, while we look forward
14 to, you know, building this bridge to the other
15 side where hydrogen may or may not be.

16 We need to construct this bridge out of
17 other strategies. While efficiency has always
18 been job one for energy in California and we have
19 great access to electricity and natural gas, we've
20 had no access to efficiency in motor vehicles.
21 We're restricted from dealing with CAFE; called
22 for doubling of the fuel economy standard way back
23 in 2003 and have yelled about it ever since.

24 At least at the federal level there's
25 been some action, inadequate as some of us may

1 feel it is. At least they're moving. And that's
2 about all we can do unless we're privileged to
3 have the spillover benefits of the 1493 bill,
4 which is a tailpipe emissions reduction for CO2,
5 which brings with it some efficiency.

6 But, in the meantime we need to think
7 about, you know, what do we construct that bridge
8 out of as we move to the future. Now taking into
9 account, whoops, ethanol was, you know, the
10 panacea and maybe it's not that panacea.

11 When you go to any alternative fuels
12 conferences and events there's a lot of talk about
13 both natural gas and propane. And I know that
14 bothers some people because it's a fossil fuel.
15 It still may be part of the first few steps that
16 are taken as we move to another future.

17 And I'm probably leaving some fuels out.
18 We all love hybrids. And yet there's no product
19 out there to speak of. And the grid really has to
20 be beefed up a lot.

21 But we have time to do both. I mean we
22 need to accelerate, in my opinion, plug-in
23 hybrids. And we need to accelerate the grid, and
24 lord knows what other fuels that are being left
25 out of my thoughts at the moment. But that's just

1 part of what's going through our mind here in
2 thinking of this future.

3 We really need to call on the public.
4 They're way behind schedule, we're way behind
5 schedule. I could almost predict that would
6 happen this first meeting. And we're losing panel
7 members, one by one.

8 So, although no blue cards showed up up
9 here, if there's any members of the public who
10 would like to say something, just get up to the
11 mike and first ones up.

12 You beat the lady to the podium, but
13 she's next.

14 MR. ALSALAM: That's why I got the front
15 row, I guess.

16 My name is Jameel Alsalam; I'm a
17 graduate student at UC Berkeley. But I've been
18 spending the past several months working with the
19 Environmental Defense Fund to do sort of my
20 masters thesis on the topic of AB-118
21 implementation. I had a brief meeting actually
22 with Commissioner Douglas last semester when this
23 was set up.

24 But I wanted to -- my paper's nearly
25 complete and I'm going to be putting it in the

1 record. But I wanted to give a few conclusions
2 that I got from it.

3 The first thing is that I think we've
4 been talking about we've got a fairly small amount
5 of money to spend, and the 1007 report makes clear
6 how much leverage that needs in that it talks
7 about \$100 million a year in state funding, and on
8 the order of \$3 billion a year in private
9 investment. And I think that that 30-to-1 ratio
10 is sort of an amazing challenge.

11 As far -- Will Coleman was talking about
12 the lack of certainty and how to decide where to
13 prioritize the money, and so I wanted to talk
14 about a couple of the alternatives.

15 I think one obvious way to go about it
16 is in a similar way as the Carl Moyer program
17 where there's sort of specific project types that
18 are set out beforehand and ways to measure the
19 benefits from those projects through test
20 procedures, et cetera.

21 I think unfortunately that this
22 situation is quite different and that it's not an
23 appropriate model for a couple reasons. One is
24 that we're talking about we want to fund
25 innovative technologies. And in many cases the

1 test procedures necessary to measure the benefits
2 in a systematized way are not going to be there.

3 And also because they're innovative new
4 technologies, they're generally going to be more
5 expensive the more innovative they are, and so
6 they won't look good on those metrics.

7 So I guess I would caution against
8 spending a lot of time trying to create cost
9 effectiveness metrics, because I'm not sure
10 that'll steer us towards the things that we want.

11 I also think that that kind of model
12 sort of ignores the greater context of climate
13 policy in California. When you were talking about
14 the \$3 billion per year, obviously AB-118 can't
15 get that kind of leverage.

16 We're going to be looking to the low
17 carbon fuel standard or AB-32, in general, to be
18 bringing out the private investment. But I think
19 that sort of if we imagine that there'll be market
20 systems and low carbon fuel standard or possibly
21 AB-32, those types of policies need sort of
22 options on the table.

23 When the policies are put in market
24 participants will be forced to sort of think
25 about, you know, do I want to keep investing in

1 petroleum or invest in something else. But if
2 something is quite early stage and they need to
3 meet compliance in the next couple years, the
4 technologies need to be ready.

5 And I think that's where AB-118 has a
6 role to try and get as many technologies to a
7 point of being ready to be used in other policy
8 contexts.

9 So I guess my conclusion is that I
10 think, as opposed to spending a lot of time trying
11 to figure out exactly which technologies are going
12 to be the ones that make a difference, it would be
13 most useful to sort of go through all the
14 technologies that have potential and think about
15 the barriers they face; and to what extent
16 projects can be found to address those barriers.

17 I go into some more detail in the paper,
18 but I'll go for now. Thank you.

19 VICE CHAIRPERSON BOYD: Thank you.

20 MS. MORROW: Good morning, Commissioner
21 Douglas, Commissioner Boyd. My name is Colby
22 Morrow and I'm with Southern California Gas
23 Company and San Diego Gas and Electric. And I
24 wanted to address two things.

25 First to Mr. McKeenan's comment about

1 the distribution system being focused on liquid.
2 I would just like to remind everyone that we have
3 a much more robust distribution system of
4 electricity and natural gas that far surpasses any
5 liquid fuel distribution system.

6 And then, Commissioner Boyd, that goes
7 to your comments about bridge fuels that clearly
8 the distribution system -- and given that, you
9 know, we have to address the grid and natural gas
10 is petroleum, there are, you know, things that
11 need to be considered, but the distribution system
12 is there. And natural gas, in particular, clearly
13 can be a bridge fuel especially in combination
14 when it's combined with hydrogen to hi-thane fuel.

15 So, thank you very much for the
16 opportunity.

17 VICE CHAIRPERSON BOYD: Thank you.
18 While somebody else is racing to the mike I'll
19 just mention that, you know, heavy duty is a
20 very -- we talked about heavy duty lightly here,
21 but heavy duty has all kinds of potential. Not
22 only to use natural gas, but to have hybrids
23 approaches to the propulsion systems in heavy
24 duty.

25 There are hydraulic hybrids; there are

1 electric hybrids; there are another combination of
2 things that we need to think of in the shorter
3 term of technology and fuels.

4 I thought somebody would race to the
5 mike. Tim, it's all yours.

6 MR. CARMICHAEL: Seeing nobody race to
7 the mike, I had two questions. Going back to
8 Mike's presentation for just a second, the pie
9 chart that you showed about petroleum and
10 alternative fuels, you mentioned a couple of
11 number stats associated with that as far as where
12 we want to get to in volume of fuels. And then
13 some growth per year.

14 Could you re-present those, restate
15 them?

16 MR. SMITH: Sure. Just to give a sense
17 of the magnitude of what we need to accomplish, we
18 just basically did some simple arithmetic and
19 struck an average.

20 If we take the 2022 projections for fuel
21 demand that came out of last 2007 energy report,
22 and even applied the 20 percent alternative fuel
23 target, I guess -- no, actually, it was a little
24 more than 20 percent, it's -- 22? 22 percent, I'm
25 sorry.

1 And applied that to the gallons of the
2 gasoline and diesel that we consume it gives us a
3 figure approaching 5 million gallons that we would
4 need to consume of alternative fuels every year.

5 Now, to get from here, which we're at a
6 very small number, to get to the 5 billion gallons
7 consumed every year we just simply took an average
8 over the next 14 years and how much alternative
9 and renewable fuel that we have to add, new supply
10 of alternative and renewable fuel we have to add
11 to the market every year to get to that nearly 5
12 billion gallon target.

13 Again, it's just a -- it's an example to
14 show the magnitude of the challenge facing us; on
15 average every single day we have to add a million
16 gallons of new supply of alternative and renewable
17 fuel to the market.

18 Now, clearly that's not happening. So
19 at some point there's going to have to be a huge
20 balloon increase in the supply between now and
21 2022 in order to meet that target.

22 Again, with deference to the
23 conversation we had earlier about the greenhouse
24 gas targets, we just simply use the alternative
25 fuel target as applying simple arithmetic to give

1 the audience and the Committee members an idea of
2 the magnitude.

3 MR. CARMICHAEL: Great, that's -- okay,
4 thank you. And I appreciate that. I just wanted
5 to ask a question -- know you're right, but also
6 to emphasize that point, as we are talking about
7 great magnitude.

8 The second question I had was revisiting
9 your plan for what's going to happen between now
10 and the next meeting, July 9th. Staff's going to
11 draft a plan based on the input today, and your
12 experience, and come back to us with at least an
13 outline? Or, you know, -- is that the --

14 MR. SMITH: That's correct. We'd like
15 to try and have something in advance of that so
16 that we can provide the Committee members and post
17 it on our website for public review in advance of
18 the meeting, so we could provide a little more
19 focus to the conversation when we meet again.

20 MR. CARMICHAEL: Thank you.

21 COMMISSIONER DOUGLAS: We have a comment
22 from Tom Frantz.

23 MR. FRANTZ: Yeah, a couple points. I
24 guess I could put a lot of this in writing to
25 someone, but since I'm here I'll say it.

1 Regarding the anti-idling law, the five-
2 minute anti-idling rules, as far as I know, I
3 tried to contact CARB and Highway Patrol and local
4 air districts to see if they're going to enforce
5 this law. And there's no intent so far to enforce
6 the rule. Absolutely none. The Highway Patrol
7 adamantly refuses to enforce the law. So I don't
8 know what the plan is there, but there's a lot of
9 fuel savings potentially if the law would be
10 enforced.

11 Second, I live in ag and oil-production
12 territory in Kern County. The oil production
13 burns a lot of fuel to produce things like steam
14 to inject into the ground. And I see a trainload
15 of coal coming into Wasco every week to supply
16 three 50 megawatt power plant cogeneration
17 plants.

18 I'm hoping that there will be some
19 incentives for that to stop, and that they would
20 burn natural gas instead. They actually also have
21 permits to burn tires and pet coke and any cheap
22 fuel they can find to produce oil.

23 I know it would raise the cost of oil,
24 but it would be a lot cleaner if they used natural
25 gas. So, I don't know if we can make incentives

1 that would make that changeover a little faster.

2 And then farming, you know, we had the
3 Carl Moyer program and different programs that I
4 personally have participated in, because we
5 converted our pumps to diesel a number of years
6 ago to, you know, poor quality diesel engines.

7 And then we were given \$20,000 to buy a
8 22,000 engine, which was a great deal because we
9 saved so much fuel we actually made a lot of money
10 on that program.

11 And now we're being given money, if we
12 can wait in line long enough, to switch to
13 electricity. It's actually cheaper right now to
14 switch to electricity immediately and pay the full
15 cost than to wait in line a year and a half.
16 Because it would save even more money. I'm
17 talking about tens of thousands of dollars per
18 pump because the price of diesel is too high right
19 now.

20 So the whole incentive thing needs to be
21 looked at very carefully. Sometimes the incentive
22 is way too high because the benefit is huge. And
23 at the same time, though, there's a lot of farming
24 enterprises where they still use the old dirty
25 diesel engines. And it seems like no incentive is

1 high enough for them to take the time or to invest
2 the few thousand dollars they need to make the
3 switchover. So I don't know if incentives can be
4 changed to make people more willing to make some
5 of these switches.

6 I hate to use the word requirement in an
7 incentive, but if you're required to take the
8 incentive, that would be progress in some cases.

9 Thank you. Oh, one more thing. It
10 seems millions of tons of ammonia are released
11 into the San Joaquin Valley air every year from
12 dairy lagoons and different places like that. And
13 ammonia, I understand, is a pretty good fuel. And
14 they're starting to capture methane from lagoons,
15 dairy lagoons. And I'm wondering if, seems like
16 the ammonia could be captured, as well. But I'm
17 just throwing that out there right now.

18 VICE CHAIRPERSON BOYD: Mr. Cackette, do
19 you want to respond to a couple of the points?

20 MR. CACKETTE: On the idling, there is
21 an effort underway to enforce that. We're out at
22 the truckstops enforcing it at night right now.
23 And there's a contract being done with San Joaquin
24 Air Pollution Control District to complement the
25 enforcement. So there's been citations issued

1 already. It's not overwhelming, but it's
2 definitely starting.

3 MR. CARMICHAEL: Is that ARB doing that
4 or is it ARB and CHP? Who actually does that?

5 MR. CACKETTE: It's ARB. We have one
6 CHP person on there for safety reasons. But we're
7 doing the citations, and the Valley District will
8 be doing them as a pilot program, and then we'll
9 expand that to all the areas in the state.

10 COMMISSIONER DOUGLAS: Bonnie.

11 MS. HOLMES-GEN: Thanks, Commissioner
12 Douglas. Bonnie Holmes-Gen, again. I just wanted
13 to make a couple comments and ask a question, as
14 we're nearing closing.

15 And I wanted to support the idea again
16 that this investment plan should focus on a few
17 key priorities in terms of funding. And I would
18 definitely agree that electrification and hydrogen
19 fuel cells, both, of course, from the cleanest
20 sources available; hopefully a majority from
21 renewable sources would be on the list.

22 And I think that possibly some work on
23 advanced biofuels, non-crop-based biofuels. But
24 biofuels made from waste products, cellulosic,
25 those sorts of things could be on the list.

1 I'm open to talking more about
2 efficiency. I certainly see the importance of
3 what's being discussed here. I'm just concerned
4 that we really need to focus money, if we're going
5 to make a difference, if we're going to move
6 forward on alternative fuels, that we need to
7 really focus on some of those key obstacles that
8 are out there in the next few years. And try to
9 make some breakthroughs so that we can move
10 forward on some of these fuels that really can
11 make a difference for the long term, that are
12 sustainable, that are meeting our air quality
13 goals, and helping us achieve cleaner air.

14 And, of course, that means we have all
15 the public health benefits. And those that are
16 really going to set us up for success, not just
17 for 2020, but in the 2050 timeframe, as we talked
18 about earlier.

19 So I just wanted to tie all that
20 together. And, again, just underscore the
21 importance of a key focus in terms of funding in
22 the early years to make breakthroughs in those
23 areas.

24 I also wanted to say I hope we have also
25 in the investment plan discussion of matching

1 funds. I hope we can leverage these funds and
2 double or triple the amount of money or more. I
3 know the South Coast has tremendous success with
4 that, in leveraging funding. I think that's
5 something that we can have success with. It
6 should have a focus on that and create some
7 criteria where we're trying to attract projects
8 that do have an investment, you know, at least a
9 match or, you know, at least one-to-one or two-to-
10 one match in terms of other sources of funding for
11 these projects.

12 And then finally I did want to ask, I
13 saved this question from earlier. I would either
14 now or subsequently like to get a better idea of
15 how what we're doing here in the 118 Advisory
16 Committee is going to mesh with some of the work
17 that's going on with the low carbon fuel standard.

18 We talked a lot about sustainability and
19 the importance of that. And, of course, that's
20 being looked at, the low carbon fuel standard, as
21 it's being looked at here. And where there's a
22 requirement here for the CEC to actually develop
23 sustainability criteria.

24 So I would like to get a better sense,
25 at least from your perspectives at the CEC and

1 ARB, how what we're doing is going to mesh with
2 the work that's going on in the development of the
3 criteria under the low carbon fuel standard.

4 MR. CACKETTE: I can add a little bit on
5 that, but it may be at the next meeting it would
6 even be worthwhile to have an update presented, a
7 status report on where we are with the low carbon
8 fuel standard, or maybe that could be included in
9 the strawman documentation that's going to come
10 out before the next meeting.

11 There are a lot of commonalities. For
12 example, the whole issue of the lifecycle for
13 biofuels is going to be addressed. And I think
14 addressed by something like June-ish timeframe.
15 And so that will hopefully play into this. And I
16 think, you know, result in some enhancement of our
17 understanding on the short term rather than in a
18 year or two.

19 EPA's doing the same thing with their
20 renewable fuel standards, so they're working on
21 lifecycle and we're sort of lock at the hip with
22 them to make sure we understand what they're
23 doing. And that there are common assumptions and
24 compatible assumptions, things like that.

25 So, we're willing to do that if that

1 would be helpful for the Advisory Committee, as a
2 whole.

3 MR. CLARKE: Could I just make a quick
4 comment to Bonnie. I'd just like to address the
5 point you made.

6 I think it is vital that we make a
7 difference. And one of the issues that I have,
8 I've been in and around the hydrogen fuel cell
9 debate for nearly 30 years now. I've been heavily
10 involved in a range of technologies around
11 hydrogen as a fuel.

12 And there's a concept that's common to
13 pretty much all technologies, they hit a plateau.
14 And if you look -- my company's done a lot of work
15 on charting dollars invested for benefits and
16 things like that.

17 If you look globally the amount of money
18 that's been put into fuel cells, and then compare
19 it against the amount of money that's been put
20 into alternative liquid fuels, low carbon and zero
21 carbon liquid fuels, it's about 1000-to-1.

22 And if you chart dollars invested versus
23 improvement in fuel cell capability it's
24 absolutely flat-lined. I'm very close to a number
25 of high profile fuel cell development initiatives

1 right now.

2 And I'll challenge you to find anybody
3 that can show a fuel cell that can run at greater
4 than 50 percent complete cycle efficiency. That
5 means that 50 percent of the energy that goes to
6 containing the hydrogen that feeds it is lost to
7 the fuel cell.

8 A diesel is 50 percent, and a hydrogen
9 fueled reciprocating engine is about 40 percent.
10 If you look at the inefficiencies that go into
11 wasting energy when we make hydrogen, and you made
12 the comment hopefully from renewable sources,
13 well, here's the bad news about renewable sources.

14 The electricity from renewable energy is
15 so precious a commodity it really isn't feasible
16 to waste upwards of 80 percent of it by turning it
17 into hydrogen and then burning it inefficiently.

18 So if we want to make difference and
19 given the billions of dollars that have been spent
20 and invested and wasted in the hydrogen economy,
21 we could do better to actually focus on things
22 that are here and available right now, things that
23 we can use right now that actually utilize the
24 existing infrastructure.

25 One of the sad things is at the

1 political level the level of real science input to
2 the hydrogen stories is quite lacking.

3 And I understand what I'm saying is a
4 radical departure from a lot of people's cherished
5 views on a hydrogen economy, but the papers are
6 out there. The laws of thermodynamics are the
7 laws of thermodynamics. Unless somebody can show
8 me a full -- then it sinks. Then we're going to
9 be stuck with the fact that we waste energy when
10 we make hydrogen. And we waste hydrogen when we
11 burn it.

12 MR. EMMETT: Well, I think this is a
13 good debate to have, but there's a tremendous
14 amount of progress being made in the area of
15 hydrogen fuel cells. I'd encourage you to look at
16 a Honda, for example; tremendous improvements in
17 performance, reduction, weight, durability.

18 And so I think this is a debate that, I
19 mean if we set the -- I think performance
20 standards are what we need to be talking about
21 here. How are these fuels and technologies
22 performing. And how are they going to deliver the
23 benefits that we all care about.

24 So, hopefully we can set those
25 performance standards and let the fuels and the

1 technologies come to the table and play the game.

2 MR. CACKETTE: Well, I think that is one
3 thing that we ought to do from an administrative
4 standpoint, is if we're going to have these
5 debates about various fuels and their merits and
6 lack thereof, how we're going to do that in our
7 two remaining meetings, of which the last one is
8 going to be to apparently put the plan together,
9 or approve it. So, we've got basically one
10 meeting, and I -- there are some significant,
11 really different viewpoints than what you've set
12 forth on hydrogen.

13 I want to make one comment. For all the
14 members, you were handed out a copy of the state
15 alternative fuel plan. And I know reading time is
16 short, and so if you don't have a chance to read
17 every carefully selected word, I would refer you
18 to page 72 in chapter 6, called, The 2050 Vision
19 Statement.

20 And in that 2050 vision statement you'll
21 see what a lot of fairly reasoned people think the
22 future does look like in terms of transportation
23 and transportation fuels. And, in fact, it's kind
24 of what Bonnie said, which is we need to focus now
25 because there are really only three fuels that

1 play in that long-term vision, which is hydrogen,
2 electricity and biofuels.

3 And somebody else talked -- I think Jim
4 said something about we need to worry about how
5 they're made. And maybe that's part of a role of
6 this money, as well. Because all of those fuels
7 could be made in a dirty way, or they could be
8 made in a way that has very low carbon. And
9 that's, I think, what our challenge is.

10 There may be bridging technologies to
11 get you there that we could deal with in the short
12 term, but it's pretty clear that those are the
13 technologies that are able to provide the carbon
14 reductions that are needed to meet a 2050 type
15 standard.

16 So, I'd ask you to please take a look at
17 that before the next meeting.

18 VICE CHAIRPERSON BOYD: The gentleman --
19 you're going to have to go to the microphone if
20 you want to speak.

21 MR. ROSS: I think that one huge
22 contribution that the Energy Commission can make
23 to this whole thing is doing rigorous analysis
24 before you make decisions as to how you would
25 deploy.

1 In other words, there's strong emphasis
2 here on deployment rather than say R&D, but the
3 fact is that what is the big mistake being made by
4 the Department of Energy is they're not doing that
5 kind of analysis on hydrogen, for example. They
6 have a fantasy about it.

7 And when anybody asks the Bush
8 Administration what are you doing about energy,
9 it's the hydrogen economy, you know. And that's
10 where the Energy Commission can have a very
11 important role. The amount of money that you have
12 is not enough to do this job. You're going to
13 have to bring in a lot of other people.

14 So the critical thing is doing the right
15 things. And that demands analysis which the
16 Energy Commission can do, it has the people to do
17 it.

18 VICE CHAIRPERSON BOYD: Could you
19 identify yourself for the audience?

20 MR. ROSS: I'm sorry, I'm Howard Ross,
21 Ross Transportation Technology.

22 VICE CHAIRPERSON BOYD: Thank you.
23 John.

24 MR. SHEARS: One more revisit on the
25 number of workshops. I mean obviously it makes

1 sense that we wait until we have the straw draft.
2 And I think at that point we can discuss -- I
3 think we're not going to have a high comfort level
4 with one more workshop after the draft is out.

5 In terms of this debate about hydrogen,
6 you know, our organization's perspective is to
7 keep all the options open. I think, you know, we
8 have some of the world's leading experts on
9 hydrogen here in northern California.

10 So if we need to have that issue aired
11 out more thoroughly, you know, we can invite,
12 well, Dan, as an example, Dan Kammen; he's one of
13 the members of the Committee. Also individuals
14 like Dr. Joan Ogden at UC Davis, Institute of
15 Transportation Studies and the research group
16 there, to talk about that.

17 Certainly there are challenges for all
18 of these technologies. But, I think, you know, we
19 should -- in order to air this out we might want
20 to bring some of these experts, world's leading
21 experts on these issues here, so we can cut to the
22 chase on this.

23 VICE CHAIRPERSON BOYD: Well, the Fuel
24 Cell Partnership's sitting in the back of the room
25 soaking this all up. I'm sure they have some

1 thoughts. Catherine, I don't know if you want to
2 send us some thoughts, or wait for the next
3 roundtable discussion.

4 MR. SHEARS: Yeah, I didn't want to put
5 Catherine on the spot, but --

6 VICE CHAIRPERSON BOYD: But I did.

7 MS. DUNWOODY: Okay.

8 VICE CHAIRPERSON BOYD: And then we're
9 about the bottom of the barrel because we're about
10 out of time.

11 MS. DUNWOODY: Sure, well, I'll keep it
12 quick. Catherine Dunwoody, California Fuel Cell
13 Partnership.

14 I think there's a lot of good analysis
15 on hydrogen and fuel cells. The Department of
16 Energy has done a lot of studies through the
17 national labs, through universities, National
18 Academy's coming out with a study. Drafts should
19 be out hopefully within a month, looking at
20 hydrogen and the benefits it can provide for
21 energy and the environment and climate.

22 So, I certainly hope that this group
23 takes a very balanced look and keeps a lot of
24 these options open. I think when we're looking at
25 innovation and far-reaching technologies, you

1 know, standing here today it's much too early to
2 dismiss any of these. And hope to just encourage
3 you to keep an open mind.

4 But also encourage all of you who'd like
5 to experience hydrogen fuel cell vehicles
6 firsthand, to come to the California Fuel Cell
7 Partnership where you can drive these cars. They
8 are real; they're on the road today. Yes, they
9 have challenges. We still need to make progress.

10 But it's very real. And I drove a car
11 here today; drive a car on a regular basis.
12 Hydrogen fuel cells work and they're making great
13 progress.

14 So we have a public tour every fourth
15 Friday. Come on out and give it a try.

16 VICE CHAIRPERSON BOYD: Thank you.
17 Seeing no more raised hands, I think we can work
18 to start concluding this before we lose all the
19 Advisory Panel here shortly. We committed them to
20 noon. Most have been able to stay longer.

21 The last item on the agenda says future
22 meeting dates and locations. I will confess,
23 John, I don't know if it's two or three more
24 meetings. Staff, everybody will have to debate
25 that point.

1 Another question is where. There was
2 some -- there were a lot of hints to us that we
3 should move this around the state. And so I guess
4 we'd look to folks to volunteer. Where might be
5 the kinds of places we should have other meetings,
6 or whether you'd rather stick to Sacramento.

7 I will say, as the Energy Commission
8 down through the years has hosted out-of-town
9 hearings on its Integrated Energy Policy Report,
10 we've used state buildings all over the state.
11 And we get terrible turnout.

12 So, we're open to suggestion to where
13 might be other positive venues if you think
14 putting the show on the road is worth it. Tim.

15 MR. CARMICHAEL: Clarification. The
16 request for moving around came from Committee
17 members or the public or the Administration?
18 Where did it come from?

19 VICE CHAIRPERSON BOYD: Well, Mike,
20 correct me if I'm wrong, but I think in the
21 process of debating all the various, the bill and
22 its progeny, there has been suggestions more than
23 once that we meet in other places.

24 But if that's not true -- it's not our
25 idea, it's --

1 MS. HOLMES-GEN: Can I comment?
2 Actually there's a concern that the CEC hold
3 workshops on this plan in various parts of the
4 state. And that is, I think, part of the current
5 draft, the cleanup legislation.

6 But that would be, in terms of CEC
7 workshops on this plan. I'm not sure if you
8 consider -- you're going to be having workshops
9 that are separate from these AB-118 Advisory
10 Committee meetings? Or if you view these as the
11 workshops. So, that's, I guess, my question.

12 VICE CHAIRPERSON BOYD: No, there will
13 be other, quote, workshops. This is an Advisory
14 Committee meeting. Some people refer to it as a
15 workshop, it's a public Advisory Committee
16 meeting. It functions like a workshop, and to
17 some degree, but I'm sure the staff might correct
18 me, has in mind other workshops for other
19 components of AB-118.

20 MR. SMITH: That's correct. As I
21 mentioned in my comments, we are considering and
22 would like to implement workshops once the
23 investment plan is adopted. When we move into
24 developing solicitations and solicitation packages
25 we'd like to have public forums to help us develop

1 those packages and get additional input, for the
2 shape and focus of those solicitation packages
3 based on what is presented in the adopted
4 investment plan.

5 VICE CHAIRPERSON BOYD: If everyone's
6 comfortable we'll continue to have these meetings
7 here. That's fine by us.

8 MS. HOLMES-GEN: I'd vote for that. I
9 think that the Energy Commission needs to have a
10 forum, despite the fact that it's definitely more
11 convenient for me and others. I think the Energy
12 Commission needs to have some kind of forum to
13 comment on this investment plan as it's being
14 developed in other parts of the state.

15 I don't know, again, if it has to be
16 through these meetings or be separate workshops
17 that some of us who are interested would want to
18 attend.

19 But I do think there needs to be a forum
20 in, for example, Los Angeles, San Joaquin Valley
21 potentially. Especially with all the concern
22 about the ethanol plants in the San Joaquin Valley
23 that was brought up. I know there's a lot of
24 concern by Valley folks about how this plan is
25 going to impact them.

1 So maybe there needs to be some followup
2 discussions with the Commission to determine what
3 their plan is in terms of workshops, public
4 workshops prior to the adoption of the investment
5 plan.

6 COMMISSIONER DOUGLAS: If I didn't -- I
7 don't remember from your slide, what is the amount
8 of time we're going to have between the draft
9 investment plan and a final that will be voted on
10 by the Advisory Committee? Do you know?

11 To what extent was the staff planning
12 workshops --

13 MR. SMITH: We hadn't considered
14 workshops in that window. The last Advisory
15 Committee meeting we were targeting for the end of
16 August. So it would be about a two-month window,
17 month-and-a-half window; closer to two-month
18 window if we're targeting the last business
19 meeting in October.

20 It certainly provides enough time for
21 additional workshops.

22 MR. SHEARS: And this, also, I guess
23 goes to sort of -- revisiting whether it's three
24 workshops that aren't officially AB-118 Advisory
25 Committee meetings or something -- want to have

1 the opportunity to have this aired out, again,
2 especially since we're talking about, you know,
3 this is the first shot we're going to take at
4 this. And it's going to be, you know, if the
5 Legislature goes along with it, a two-year round.

6 So we want to make sure that we really
7 have the opportunity to have as much input and
8 insight. There may be also some great ideas that
9 come in from the gallery, you know, as approaches
10 or for some perceived problems with some of the
11 approaches to alternative fuels.

12 VICE CHAIRPERSON BOYD: Karen and I just
13 counseled and think that if there are to be
14 workshops on the plan, that's the forum to move
15 around. And that this group should continue to
16 have its meetings here, if that's okay with you
17 all.

18 COMMISSIONER DOUGLAS: I just need to
19 add, from the perspective of a member of the
20 ;public who would like to have some input into the
21 plan, I think it would be difficult for them to
22 walk in the door of the second or third Advisory
23 Committee meeting and sit through a discussion and
24 just given the dynamics of the group, the fact
25 that we will have met once or twice or so on.

1 I think it's probably -- it will
2 facilitate (inaudible) comment actually on the
3 draft plan that people can (inaudible).

4 MS. HOLMES-GEN: Yeah, that sounds good.

5 VICE CHAIRPERSON BOYD: Any other
6 comments? Tim.

7 MR. CARMICHAEL: On the schedule
8 specifically, I'm wondering what the group's
9 thinking was about moving the August 26th meeting
10 a week later. August 26th is either going to be
11 the last -- it's likely to be the last week of the
12 legislative session. But it's possible that it'll
13 be the week before, but we just don't know that
14 right now.

15 And I was thinking a week later we don't
16 have that potential conflict.

17 VICE CHAIRPERSON BOYD: Good point. Is,
18 the other date, I guess, is July --

19 MR. SMITH: July 9th.

20 VICE CHAIRPERSON BOYD: -- around July
21 9. Does that work for --

22 COMMISSIONER DOUGLAS: I would just
23 mention Dan Kammen, whose emails were coming
24 through to me today, also sent an email saying
25 that July 9th -- saying that neither date worked

1 for him. So moving the last date is out, and
2 that's at least one conflict for July 9th.

3 VICE CHAIRPERSON BOYD: Okay, well, I
4 think staff will have to do a survey of everybody.
5 Around the 9th is as close as I'll do it right
6 now. And check and see where we get the most
7 participation by the Advisory Committee.

8 MR. CARMICHAEL: Thank you.

9 VICE CHAIRPERSON BOYD: Commissioner
10 Douglas, any other comments?

11 COMMISSIONER DOUGLAS: No.

12 VICE CHAIRPERSON BOYD: Just like to
13 thank everybody for your durability, as well as
14 your participation. This has been interesting and
15 thank you, all. See you again.

16 (Whereupon, at 12:41 p.m., the Advisory
17 Committee Meeting was adjourned.)

18 --o0o--

CERTIFICATE OF REPORTER

I, PETER PETTY, an Electronic Reporter,
do hereby certify that I am a disinterested person
herein; that I recorded the foregoing 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 31st day of May, 2008.

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345□