

BEFORE THE STATE OF CALIFORNIA
THE NATURAL RESOURCES AGENCY
CALIFORNIA ENERGY COMMISSION (CEC)

In the Matter of:)
) Docket No. 09-ALT-1
2010-2011 Investment Plan for the)
Alternative and Renewable Fuel and)
Vehicle Technology Program)

Alternative and Renewable Fuel and Vehicle
Technology Program Advisory Committee Meeting

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

FRIDAY, JULY 16, 2010

Reported by:
Peter Petty

Commissioners (and their advisors) Present (WebEx)

James D. Boyd, Vice Chair and Presiding Member, Transportation
Committee

Tim Olson, Advisor to Commissioner Boyd

Anthony Eggert, Commission and Associate Member, Transportation
Committee

David Hungerford, Advisor to Commissioner Eggert

Staff Present:

Jennifer Allen

Peter Ward

Leslie Baroody

Pat Perez

Michael Smith

Charles Smith

Advisory Committee Members Present

Shannon Baker-Branstetter, Consumer Union

Tom Cackette, California Air Resources Board

Tim Carmichael, California Natural Gas Vehicle Coalition

R. Brooke Coleman, New Fuels Alliance

Will Coleman, Mohr Davidow Ventures

Peter Cooper, California Labor Federation

Leslie Brown Garland, Western Propane Gas Association

Barbara Halsey, California Workforce Investment Board

Bonnie Holmes-Gen, American Lung Association

Mark Leary, California Department of Resources Recycling
and Recovery

Jananne Sharpless, Public at Large

John Shears, Center for Energy Efficiency and Renewable
Technologies (CEERT)

Also Present

Public Comment

Andreas Klugescheid, BMW Group

Joan Ogden, UC Davis STEPS Program

Todd Campbell, Clean Energy

Matt Horton, Propel Fuels

Catherine Dunwoody, CA Fuel Cell Partnership

Cindy Wilcox, Wilcox Consulting

Tom Fulks, Mightycom for Daimler Fuel Cell Vehicle Program

Jian Zhang, GRIDX Inc.

Christopher Perkins, Unimodel Systems

Brian McMahon, California Workforce Investment Board

Ron Retterer, CalGreenatWork

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

2 JULY 16, 2010

11:23 A.M.

3 VICE CHAIR BOYD: Good morning, everybody. For
4 those who do not know me, and I have been around so long, is
5 there anybody that does not? But, I am Jim Boyd,
6 Commissioner and Vice Chair of the Energy Commission. I
7 chair the Transportation Committee. I am joined by
8 Commissioner Anthony Eggert, the other member of the
9 Committee, and I will give him a chance to say a few words
10 in a moment. You may notice my voice is a little husky, it
11 works right now because I just finished another cup of hot
12 tea, which will wear off shortly, but I have been wrestling
13 with a summer something for a while, so, those who know me
14 know that I can go on ad infinitum, particularly Mr.
15 Carmichael, who has been known to make comments like that,
16 but with your luck today, I will probably run out of voice.

17 I want to thank all you members of the Advisory
18 Committee for being here. There may be members on the
19 phone, we will find that out in a moment, and other folks.
20 I want to thank all of you in the audience for having an
21 interest in the work of the Advisory Committee. As you
22 know, this morning, we are having a meeting of the Advisory
23 Committee, it is a public meeting and, so, you are all
24 welcome and we appreciate your being here this afternoon.
25 We have noticed a public hearing on the draft report for the

1 Investment Plan for the AB 118 or the Alternative and
2 Renewable Fuel and Vehicle Technology Program - it is easier
3 to say the AB 118 Program, therefore - and we want to
4 invite, of course, the Advisory Committee members to stick
5 with us and participate in the public hearing; secondly, we
6 noticed, of course, public comments at the end of the
7 Advisory Committee meeting this morning, and should those
8 public comments tend to start running late and would eat
9 into a lunch hour for the Advisory Committee member staff
10 and Commissioners, we will break the testimony and start it
11 up again, and finish it beginning at 1:00 when the public
12 hearing is scheduled to start, and we will finish that
13 public testimony should it carry over; I don't know if it
14 really will, and then move into the public hearing. I have
15 the feeling the public testimony will be front-loaded and we
16 will probably be desperate to find some publics for the
17 public hearing, but, in any event, that is the process we
18 will follow. As indicated in the notice, and known by the
19 many of you who follow this subject pretty closely, the
20 public has had before it for some time now the Draft
21 Investment Plan for the 2010-2011 Fiscal Year, a year for
22 which this state has no budget yet, and therefore, all the
23 state employees in the room here are presumably working for
24 minimum wage, and Commissioner Eggert and I are working for
25 nothing. So, in any event, it is an interesting time. I

1 love to get that in at every public hearing and opportunity
2 that I get, the many decades the employee - oh, do not get
3 me going on that - anyway -

4 COMMISSIONER EGGERT: It is a labor of love.

5 VICE CHAIR BOYD: Yes, it is - if it was not, I
6 would have retired months ago. In any event, it is a Draft
7 Report that is the product of an incredible amount of work
8 by a very loyal, dedicated, small numbered staff, and two
9 Commissioners who have worked with the staff on that report,
10 so we all deserve credit, or if there is blame, it is the
11 staff's fault. But, in any event, it is the product of an
12 awful lot of work, it is the product of lessons learned over
13 the past year or year and a half; we have just finished, in
14 effect, this cycle that included the first Investment Plan
15 that you participated in, which really was an investment
16 plan that crossed over two years, as you know, since the way
17 legislation works, we got a late start. In any event, we
18 learned a lot, hopefully, and we have learned from the input
19 that you provided us in the previous meeting and the many
20 public comments that we received on this draft program. It
21 is really hard to meet all needs, as I stated in the
22 legislative committee a couple of days ago, the 118 program
23 that we administer runs around, if we are lucky, \$100
24 million a year, a little bit more, a little bit less. Our
25 dream when the program started was about \$120 million a

1 year, but the recession took a bite out of it just in terms
2 of the revenues.

3 In the hearing the other day, I mentioned a little
4 factoid, we Californians spend \$180 million a day on
5 transportation fuel, and this program, for a whole year's
6 effort to try to influence our use in advanced technologies
7 in transportation fuels is barely \$100 million for the whole
8 year, so this is a - as I said then, and I will say again, a
9 David and Goliath type of operation. We have to work real
10 hard to try to influence California's future with regard to
11 vehicle technologies and alternative fuels. In any event,
12 and we have to work pretty hard, as many of you have, and I
13 want to thank you, to try to hang on to that meager roughly
14 \$100 million in these tough times in the Legislature, and I
15 was delighted to have Senator Lowenthal ask if, in these
16 tough times, aren't people trying to get their hands on your
17 money, and he said it in a way that sounded like he was
18 interested in protecting the program. In any event, I did
19 indicate that, yeah, we struggled holding people at arm's
20 length from getting to the program, but at the moment I
21 think the budget is in fairly decent shape, but many of you
22 came to our rescue over the past few weeks and on more than
23 one occasion to defend efforts to use this as a revolving
24 fund for other purposes or something. In any event, enough
25 of the long introduction about the program.

1 There are a couple of other comments I want to
2 make, or that will come out during the course of this
3 discussion, and I will just introduce them and the staff
4 will talk about them. One is we are going through an
5 internal set of discussions on lessons learned in the
6 administrative processing of this program. It has been a
7 brutal year because of the budget situation, because of
8 reduced funds for low priorities, etc. etc., and the state's
9 administrative processes are more cumbersome today than they
10 were years ago, which has made it difficult for the program
11 and for us, and then, this agency, for better or for worse,
12 was processing close to, what, half a billion ARRA dollars
13 as we called them, Economic Recovery dollars, which have
14 incredible administrative requirements, and all of this was
15 being jammed through the tiny little pipe that we have here
16 that processes contracts, and so on and so forth. So, we
17 are going through a kind of a lessons learned can we come up
18 with some fixes, and recommendations on how to do this
19 differently, and perhaps better in the future, and we are
20 not prepared to discuss them today because we just kind of
21 let out a big sigh recently, finishing a lot of this, and
22 began to take account of what we might do different. The
23 other thing that we need to do is develop a metrics measure,
24 the performance of the programs now that they are being
25 launched, to assist all of us in evaluating the successes,

1 identify the failures, and help influence the decisions and
2 recommendations that are made for the future. And we are
3 going to have to pay for that, so we are probably going to
4 have to just slice a little money off the top of everything
5 to create a fund to provide for that kind of an activity,
6 which will probably have to be done by an outside consulting
7 firm of some kind, that will have to be competitively bid,
8 as everything else is, but... With that, I think I would
9 like to offer Commissioner Eggert an opportunity to say a
10 few words, and I think we should go around the room and
11 introduce the Advisory Committee members, who are here,
12 identify those who are on the phone, and then move into the
13 agenda. So, again, welcome and thank you. It will be
14 cooler in here than it will be outside today, from what I
15 hear. Commissioner Eggert.

16 COMMISSIONER EGGERT: Thank you, Commissioner.
17 And good morning, everyone. I guess the first thing I would
18 like to say is, having been involved in this activity now
19 for about a little over six months, I want to just say that
20 it has been a great pleasure to work with you in putting
21 this plan together, especially as we move towards the final
22 committee report. It has really been a great experience to
23 work with the CEC staff, to work with the advisory
24 committee, to sort of solicit your input and counsel as we
25 sort of move forward towards what I hope will be, even at

1 the modest investment of \$100 million, something that can
2 actually start to transform California's transportation
3 energy supply. I do want to reference, you had mentioned
4 these statistics which I think are pretty astounding, as you
5 said, \$100 million a year for this program, and we spend
6 about \$180 odd million per day that is on all gasoline and
7 diesel fuel, for the transportation system. I think that
8 kind of speaks to two points, and one of them is that the
9 impact that that expenditure has on our economy, that is a
10 significant expenditure on a specific energy supply that
11 helps us move goods and people around the state, and the
12 vulnerability of our economic system to fluctuations in
13 price. So, you have variations on the order of 50 percent
14 or more over a single year, and we have seen that numerous
15 times, and that \$180 million can go up or down in ways that
16 can significantly hamper the economic activity of the state.
17 And so I think we should recognize that part of our program
18 is trying to hedge against that risk to our state economy.
19 And then I think you sort of mentioned, as well, given the
20 fact that this is \$100 million a year in the context of a
21 \$60 plus billion market for transportation fuels, we do have
22 to think very strategically about how we make our
23 investments, how we leverage against other investments, how
24 we fill gaps in a way that is going to facilitate the
25 transition to a commercial market for some of these most

1 promising alternatives.

2 And I think the one other sort of quick point I
3 would like to make is that, you know, we have been at this
4 for quite a long time now, not just this particular
5 Investment Plan, which you know, I think by some estimates,
6 started a little bit towards the end of last year with a
7 significant number of workshops soliciting input, but even
8 quite a bit before that, as we sort of established the first
9 Investment Plan prior to that, the 2007 - 10-07 report -
10 and, of course, California has been investing in both in
11 terms of sort of financial investments and policy in cleaner
12 vehicles and fuels for over 30 years, and at various times
13 throughout that history, there have been a variety of
14 factors that have motivated those actions, including
15 particularly air quality, initially, eventually, energy
16 security, and energy diversity, and of course, now, climate
17 change as being a very very significant environmental
18 challenge that is facing us. And I think all of those
19 remain tremendously relevant today and I think sort of as we
20 are sort of balancing our strategy, recognizing that we do
21 have the opportunity to simultaneously address air quality
22 energy security and diversity and climate change if we do
23 this strategically, and really think hard about how we are
24 making those investments.

25 So, I guess I will not go on too much longer

1 because this is really for us to hear from you, the Advisory
2 Committee, so do not be shy. We are kind of at the very
3 final stages and we are still looking for additional input
4 if there are opportunities to improve upon the product that
5 we have before us. Commissioner Boyd made mention of a
6 couple of items that we are still wrestling with, which
7 include things like Monitoring and Verification and
8 Evaluation, in which we recognize that there is going to be
9 a significant need to make sure that we are capturing the
10 lessons from these projects as they proceed, both in terms
11 of the success stories, as well as refining future
12 Investment Plans. So, I think with that, I will just
13 introduce my advisor to my left here, David Hungerford. And
14 I wonder if maybe we should just go around the room real
15 quick?

16 VICE CHAIR BOYD: Well, let me quickly - two
17 comments, 1) thank you for reminding me to also introduce my
18 advisor, Tim Olson, sitting here, and many people know Tim
19 as a veteran of this organization and this program, and I
20 snatched him away as an advisor many many months ago, and it
21 has been of great service to me; secondly, let me just
22 remind everybody, this proceeding is being WebEx broadcast,
23 there are people out there on the phone, or otherwise,
24 listening in to this, and so I ask you to speak directly
25 into a microphone, these are the kind you have got to speak

1 right at them and have them relatively close to you, and we
2 cannot handle comments from the audience, so if anybody
3 wants to comment and we recognize you, please race up to a
4 microphone somewhere to make your comment. We will
5 certainly make time for you to get to a microphone. And,
6 thirdly, perhaps, you will notice there is not a Court
7 Reporter here, or any kind of a recording system, there will
8 be as soon as he or she gets here, but we chose to start the
9 meeting anyway, it is being recorded through the WebEx
10 system, in a sense, so we will have a record for anyone who
11 is interested in this. And although this is a public
12 hearing, we tend to always record that one way or another.
13 We will have a recording of this, but I would like to think
14 this is a little more friendly gathering and group of folks
15 compared to what Commissioner Eggert and I have been doing
16 all week, it seems like, including late last night again,
17 public hearings on power plant siting cases, which are often
18 very contentious, and you need the record. So, with that,
19 let's go around the room. Ms. Sharpless, welcome, Jan. You
20 are used to these microphones, aren't you?

21 MS. SHARPLESS: Well, everybody has a different
22 system, right. That is the problem with the world, nothing
23 is uniform. Yes, I am a former Energy Commissioner here and
24 I am also on a Board called the Western Electricity
25 Coordinating Council, which deals with the Western

1 Transmission Intertie, although I am not here speaking on
2 their behalf, they certainly carry the issues, what this
3 organization is dealing with, and there is obviously an
4 intersection between the Grid supplying capacity for all
5 this new transportation that might be coming and what we see
6 here in terms of the roll-out. So I hope I can, I guess,
7 give some counsel on how those intersections might be
8 impacting the electricity highway, shall we say? Thank you.

9 VICE CHAIR BOYD: Jan is too modest, she also was
10 long time Chair of the Air Resources Board, and so the
11 energy/air quality nexus is known to her in great detail, as
12 Mr. Cackette and I fondly remember. Thanks, Jan. Barbara.

13 MS. HALSEY: Good morning, Barbara Halsey,
14 Executive Director for the California Workforce Investment
15 Board.

16 MR. LEARY: Good morning, Commissioners. Mark
17 Leary, Cal Recycle.

18 MS. HOLMES-GEN: Good morning, it is Bonnie
19 Holmes-Gen, and I am a Senior Policy Director for the
20 American Lung Association in California.

21 MR. CARMICHAEL: Good morning, Tim Carmichael,
22 with the California Natural Gas Vehicle Coalition.

23 MS. GARLAND: Lesley Garland, Western Propane Gas
24 Association.

25 MR. CACKETTE: I am Tom Cackette with the Air

1 Resources Board.

2 VICE CHAIR BOYD: Now, Lesley, do you know if we
3 have Advisory Committee members on the phone? We do? And
4 if you are out there and can hear me, if you would just
5 chime in and introduce yourselves?

6 MR. COLEMAN: Good morning. It is Will Coleman
7 from Mohr Davidow Ventures.

8 VICE CHAIR BOYD: Good morning, Will.

9 MR. COLEMAN: Good morning.

10 MS. BAKER-BRANSTETTER: Shannon Baker-Branstetter
11 from Consumer Union.

12 VICE CHAIR BOYD: Good morning, welcome.

13 MR. COOPER: Peter Cooper with the California
14 Labor Federation.

15 VICE CHAIR BOYD: Good morning, Peter.

16 MR. COLEMAN: Brooke Coleman, New Fuels Alliance.

17 VICE CHAIR BOYD: Hi, Brooke.

18 MR. ECHOLY: Tyson Echoly [phonetic] filling in
19 for Daniel [Inaudible] at Energy Independence Now.

20 VICE CHAIR BOYD: Okay.

21 MR. [Inaudible]: Volkswagen.

22 VICE CHAIR BOYD: That is not a member. That is a
23 member of the public, correct?

24 MR. [Unidentified Speaker]: Yeah.

25 VICE CHAIR BOYD: Yeah, interested public. Well,

1 that is fine. Did we get all of our Advisory Committee
2 members? Looking for hands up on our computer screen over
3 here, or some indication, having logged in on the WebEx.
4 And she is having to scroll down the screen means that there
5 are a lot of people on the WebEx. Well, in that none others
6 have spoken up, I assume - one more?

7 MS. BAROODY: Tyson, Tyson Echoly [phonetic].
8 Okay. That is everybody, then.

9 VICE CHAIR BOYD: Well, thank you, everybody,
10 again. And, Leslie, I am going to turn it over to you, lest
11 I talk too much more.

12 MS. BAROODY: Thank you, Commissioners. And, once
13 again, we welcome you all here and those on WebEx, I am
14 Leslie Baroody, I am Project Manager for the 2010-2011
15 Investment Plan. And I am just going to run through the
16 agenda with you quickly so you know what is happening for
17 the rest of the day. And, also, I will just go over what is
18 left of the Investment Plan schedule.

19 So, we will start out this morning with Jennifer
20 Allen, and she is going to review the last Investment Plan
21 Program Funding and the current solicitations. Then,
22 following Jennifer, we will be introducing Pat Perez, our
23 new Director for Fuels and Transportation Division, and he
24 will be reviewing the key changes in the Draft Report from
25 the April version to the July 2nd version. After that, we

1 will welcome input from the Advisory Committee members and
2 those on WebEx, of course, and we will invite a discussion
3 of this draft. And then, also, we would like to perhaps
4 discuss some lessons learned in this process over the last
5 year, and any input on the development of the next
6 Investment Plan, your ideas on that. Following that, we
7 will have a public comment period for about a half hour or
8 so.

9 This afternoon, we are also hosting a public
10 hearing starting at 1:00. We will have a similar line-up
11 with Jennifer speaking on program funding and solicitations,
12 and then Peter Ward will be presenting the Committee Draft,
13 the full Committee Draft, and then we will follow that with
14 public comment. If you do have public comment, if you could
15 fill out a blue card, those are found at the entrance, and
16 then put them in the box, that would be great. And at some
17 point, we will probably take a short break to welcome the
18 Court Reporter to the room.

19 Regarding the rest of the Investment Plan
20 schedule, our plan is to post this next Final Draft, the
21 Final Committee Draft, on July 28th, about a week and a half
22 away, so any input to the Docket would be welcomed as
23 quickly as possible, that would be great. And then we would
24 like possible adoption of this plan August 11th. And that, I
25 think, wraps it up.

1 I would like to welcome Jennifer Allen. She is
2 Supervisor of the Emerging Technologies Department.

3 MS. ALLEN: Good morning. I just found out I am
4 going to be speaking again this afternoon, and I have no
5 idea what I am supposed to say this afternoon, so hopefully
6 I am not giving everything this morning with the first
7 presentation. But, we are going to go through a summary of
8 what we have done so far under the previous Investment Plan.
9 So, the first one is the Workforce Development which was for
10 \$15 million and, so far, there have been three Interagency
11 Agreements under this, one with Employment Development
12 Department and that was about \$4.5 million, then California
13 Community Colleges, Chancellor's Office, another \$4.5
14 million, and the Employment Training Panel for \$6 million,
15 and they have awarded almost \$6 million to date and it has
16 been matched by over \$10 million in both private and local
17 government funds. And the latest grouping for Workforce
18 Development included a variety of projects that included, as
19 an example, there was INC [phonetic] Corporation for
20 training technicians for hydro drive vehicles, Electric
21 Vehicle, Incorporated, which is going to be training folks
22 to work on their electric vehicle and hybrid electric
23 vehicles, and tariff utilities for vehicles that are used by
24 the utilities such as the bucket trucks and others, it would
25 be mechanical training relating to installation service and

1 maintenance, and then there were other companies that were
2 involved in receiving awards.

3 Then, next, we had the ARRA American Recovery and
4 Reinvestment Act cost-sharing dollars. We issued awards of
5 over \$36 million and those were matched by over \$105 million
6 in both federal funds and -- no, this was just the federal
7 contribution; there was a considerably larger amount in
8 private. And the awards were made, there were five under
9 Transportation and Electrification Projects and those were
10 to the Electric Transportation Engineering Corporation that
11 is working with the Nissan Leaf and the GM's Chevy Volt, and
12 that was for residential and public charging. There were
13 two Sacramento Municipal Utility District projects, one
14 working with Chrysler, one working with GM, and again, that
15 was for infrastructure for both plug-in and electric
16 vehicles.

17 Coulomb is putting in infrastructure projects in
18 Los Angeles, San Francisco, and Sacramento, and then there
19 were three projects that came in under the Clean Cities
20 solicitation, the Federal Solicitation, one was Department
21 of General Services and Propel, and that was for
22 approximately 75 to 85 stations throughout California.
23 South Coast Air Quality Management District will be putting
24 in trucks related to their Ports of Los Angeles and Port of
25 Long Beach - oh, and I forgot, under Transportation and

1 Electrification, there was also a South Coast Air Quality
2 Management District project there for plug-in hybrid
3 electric vehicles in the medium-duty classification. And
4 then the third Clean Cities project was San Bernardino
5 Association of Governments, and that was for natural gas,
6 both compressed and liquefied and the related fueling
7 infrastructure, these were heavy-duty trucks for long haul.

8 Then, there was one ARPA-E project, I am acronym
9 deficient, and so all I know about ARPA-E is that they took
10 off the "D" at the front of DARPA, for "Defense" and they
11 added the "E" at the end for "Energy," and I have no idea
12 what the middle letters stand for, but it is basically the
13 type of project now without the Defense focus, and with the
14 Energy focus, and we have one project under that, and that
15 was Envia, and that was for high energy density lithium
16 batteries. That was the ARRA projects.

17 We also had Program Opportunity Notices with
18 awards that were not ARRA-related, this was open
19 solicitation from accredited solicitations. There were
20 three of them, altogether, for biomethane production,
21 medium- and heavy-duty vehicles, and fueling infrastructure.
22 And we ended up with four biomethane production awards for
23 over \$21 million, and those ranged from projects dealing
24 with wastewater treatment facilities to landfill gas to
25 animal rendering plant facility waste. Then, under medium-

1 and heavy-duty vehicles, we had eight altogether and there
2 were two electric vehicle projects, these were all medium-
3 and heavy-duty classes, four hybrid electric vehicle
4 projects, one hydraulic hybrid project, and one natural gas
5 project. Under fuel infrastructure, we ended up with a
6 total of 19 projects and three were for biodiesel
7 infrastructure, 10 were related to natural gas, and I do not
8 remember how many actual stations that ended up putting in
9 as a result of those 10 projects, but it was more than 10
10 because some of them were multiple fueling stations. I do
11 not remember the exact number. We had one E85 project and
12 that would be for ten E85 stations throughout California,
13 and we had five electric infrastructure-related projects,
14 which would put in a total of over 3,000 charge points among
15 about 600 or so sites throughout California.

16 The last one on the list is Division of
17 Measurement Standards, this is with the Department of Food
18 and Agriculture, they are responsible for anything that you
19 purchase that has a price associated with a weight or a
20 volume has to go through the Division of Measurement
21 Standards, and so they will be looking at hydrogen from the
22 standpoint of fuel quality at the dispenser, and then also
23 for standards for the dispenser, so that, if the liter cells
24 that you are getting so much, you are actually get that
25 amount into your vehicle.

1 And the other thing that we will be looking at
2 will be biodiesel and this would be for standards related to
3 biodiesel, other fuel, and I am trying to remember now
4 whether that was above - was this above D20, Pete, do you
5 remember?

6 MR. WARD: Specifications.

7 MS. ALLEN: With specifications for, but up to
8 D20. Okay, in excess of D20. All right.

9 And these are projects that we have that are in
10 our solicitations that are currently in the works, so we do
11 not have projects that already have a Notice of Proposed
12 Awards associated with them. We have an Interagency
13 Agreement with the State Treasurer's Office and the total
14 amount is for a little over \$39 million, almost \$40 million,
15 and the staff is currently reviewing the solicitations for
16 the projects under that Master Agreement. And the biofuels
17 plant, we received 34 proposals under that solicitation;
18 Manufacturing, we received about 22. And the way this works
19 is that the proposals come in requesting either a grant or a
20 loan, and staff has the discretion to recommend either a
21 grant or a loan on those, and those that are recommended for
22 a loan will go to the State Treasurer's Office for the
23 process of securing a loan for the project. The Ethanol
24 Producers Incentive Program, that is up to \$6 million, the
25 Notice of Proposed Award for projects associated with that,

1 this is an ongoing solicitation, so it is not closed, but
2 for the first batch, there will be a Notice of Proposed
3 Awards probably within the next week.

4 The next solicitation that has been posted, the
5 proposals are due next Monday, July 19th, and that is for the
6 hydrogen fueling infrastructure, that is \$22 million. This
7 is a total of, well, fueling infrastructure is \$19 million,
8 and hydrogen transit fueling agreements is \$3 million in
9 that solicitation. And that would develop the
10 infrastructure necessary to dispense hydrogen transportation
11 fuel in California, associated with both existing vehicles
12 and with proposed OEM deployment.

13 And then we have future solicitations. The plan
14 is for a \$7 million issue for a Medium- and Heavy-Duty
15 Vehicles Center of Excellence. In general, the idea here is
16 that this would be a program, administrative, that would
17 work in partnership with the Energy Commission, and they
18 would establish a Center that would develop and demonstrate
19 Advanced, Medium- and Heavy-Duty Vehicle technologies for
20 Alternative Fuels.

21 The Propane School Bus Incentive is for school bus
22 procurement in areas that do not have natural gas, that is
23 primarily where the propane school buses will go to.

24 And Sustainability Analysis, the \$2 millions is
25 focused on forest biomass, and that is still being developed

1 as to what that program will entail.

2 The UCI Street Model was actually two separate
3 projects. NREL, we would be looking at having them gather
4 data, do a continuation of infrastructure planning for
5 electric vehicles in California, and help us in developing
6 reports and assisting in the Investment Plan, and also to
7 conduct program evaluation for AB 118. The UCI Street Model
8 is an expansion of their hydrogen infrastructure model and
9 that would allow it to be modified and used for siting of
10 any alternative fuel in addition to hydrogen, throughout
11 California. So that is what we have gone through, in a
12 nutshell, on the previous Investment Plan dollars per AB
13 118.

14 MS. HOLMES-GEN: Can I ask a question?

15 VICE CHAIR BOYD: Well, I was going to say thank
16 you, Jennifer. Now, any questions? That is fine.

17 MS. HOLMES-GEN: I just wanted to ask about the
18 hydrogen, the \$22 million, so that PON is just going out - I
19 am just wondering what the expected timeframe is to actually
20 get stations up and running under that funding.

21 MS. ALLEN: The PON has been posted for a while.
22 The proposals are due next Monday, July 19.

23 MS. HOLMES-GEN: All right.

24 MS. ALLEN: And so, Pete, do you want to give an
25 idea -

1 COMMISSIONER EGGERT: Actually, I will jump in and
2 Pete wants to join. I think, actually, one of the questions
3 we have about - that we are hoping to see as a product of
4 this solicitation with respect to the proposals, is what the
5 expectation is for construction and commissioning time, and
6 I think this is something we are very interested in having a
7 better grip on. In the past, some of these station projects
8 have taken, you know, longer than a year to bring to
9 commissioning, to actual operation. And so, both in terms
10 of the proposals, we were sort of encouraging stations that
11 could come online faster and, obviously, as they progress
12 with the construction, we will learn even more about how
13 quickly they are able to gather their permits and begin
14 construction. So, I think the answer is we do not yet know,
15 but we are hoping on the order of one to two years, and
16 sooner is better, so...

17 MS. ALLEN: There is another question from the
18 gentleman there? Anybody?

19 VICE CHAIR BOYD: There is a question.

20 MS. GARLAND: Hi. Commissioner Boyd referred to
21 the very narrow pipe and maybe I could be a Draino for the
22 pipe. It has been agonizing to look at that \$2 million for
23 the propane school buses knowing that there are vehicles
24 available and there are school districts that are eying that
25 \$2 million, and wondering when they are going to get their

1 hands on it. And assuming that we achieve the \$3 million in
2 the next plan, I just wanted to throw out there again on the
3 record, for what it is worth, our organization, we are a
4 nonprofit 501(c)(6) registered with the government, audited
5 every year, do not represent any specific company or any
6 specific manufacturer, and we have been willing to work with
7 you guys for free to basically try and administer the
8 propane funds. Whatever we can do to help to expedite
9 getting all that money on the street, to put some vehicles
10 on the street, I will bend over backwards and do gymnastics
11 that you would never believe someone of my size could do, to
12 try to make this work. So, just please, again, on the
13 record, I am throwing myself out there as a resource.

14 VICE CHAIR BOYD: I appreciate that and appreciate
15 you making an offer in such a public forum. I will
16 indicate, when we were having our lessons learned, what can
17 we do to speed things up discussion earlier this week, staff
18 did volunteer to the Commission and I that you, as an
19 organization, for instance, had volunteered that service.
20 And there is provision in the law that makes reference to
21 utilizing not-for-profits as a conduit, that we have not
22 exercised, and we are thinking about it now, definitely,
23 because it has been a brutal year for all the reasons that I
24 referenced, and then some. It is not going to get any
25 better in terms of additional funds and resources for

1 government agencies, and so we are looking at other ways now
2 that we are more comfortable with the program, and looking
3 at other ways to expedite it, so we will definitely take
4 your suggestion, your offer, into consideration as we look
5 at how to move this program along, because it is bothersome
6 to us that we cannot get the dollars out there more quickly
7 to address the program needs that are identified in the law,
8 by our agency, but just to address the general, you know,
9 desire to achieve products, build industries, and employ
10 people, and get things moving. And we would like to do it
11 more quickly. So, enough said.

12 MS. ALLEN: Lesley, would you mind stating your
13 name so that -

14 VICE CHAIR BOYD: Oh, the people out there do not
15 know who Lesley is that I am talking to.

16 MS. GARLAND: Lesley Garland. And please do not
17 interpret my impatience as a lack of gratitude for what we
18 have received.

19 VICE CHAIR BOYD: No, anyone who would offer
20 themselves up as Drano could not be impatient.

21 MS. GARLAND: Thank you.

22 VICE CHAIR BOYD: Ms. Sharpless.

23 MS. SHARPLESS: Thanks. Yes, just a couple of
24 questions. One has to do with the loans or grants that are
25 going to be issued for the biofuels, and manufacturing, and

1 ethanol producer incentive programs. We have a solicitation
2 under the current Investment Plan, we have more money in the
3 proposed Investment Plan, and obviously, depending on
4 whether you are giving a grant or a loan, there are
5 different risk assessments involved. So, I guess my
6 question is of staff, since you say this is discretionary,
7 you are going to use your own discretion to decide whether
8 or not it will be a grant or a loan; do you have some kind
9 of document that guides you in making the evaluation? Is it
10 based on risk, risk factors? Or can you give me some idea
11 of how you would be applying your discretion in this area,
12 since this is quite a bit of money?

13 MS. ALLEN: I can give you just a very brief
14 description. The solicitation itself has a series of points
15 that says, "This is eligible for a grant" and "this would be
16 eligible for a loan." If a proposal comes in for a loan,
17 then obviously it is processed through that mechanism. But
18 if there is a case where somebody says, "I want a grant,"
19 and it falls, some of the ideas fall into things that are
20 very clearly stated in the solicitation, have to go through
21 the loan process, and that would be - it is all based on the
22 rules in the solicitation.

23 MS. SHARPLESS: Okay, so you are not trying to be
24 like a banking institution, making decisions based on risk
25 analysis?

1 MS. ALLEN: That is not at this level what the -
2 until it goes to the Treasurer's Office, then the banking
3 stuff occurs.

4 VICE CHAIR BOYD: There is a key word, we are
5 utilizing the Office of the State Treasurer to process loans
6 and we are utilizing their resources, their skills, and
7 their services to deal with that program, to deal with loan
8 programs. That, too, has turned out to be an agonizingly
9 long, drawn out, cumbersome process. But, once we get it
10 fired up, which I believe their internal boards may be
11 voting on proceeding with this program later this month, we
12 will finally get it rolling. Now, that still goes to --
13 responsive to the detailed, in-depth look that is going to
14 be taken at loans and what have you, but we are turning to
15 people with those kinds of talents and skills.

16 COMMISSIONER EGGERT: And I just thought I would -
17 I think it is an excellent question, as it relates to the
18 specific strategy of investment, and I think this is another
19 area where we are likely to learn as we proceed. It is, you
20 know, obvious based on the applications that we have
21 received, particularly through the biofuels, that the
22 preference is generally for a grant, and that is not
23 terribly surprising, but sort of again making sure that we
24 are maximizing the leverage of our investments, depending on
25 where a particular project is, in terms of its risk profile

1 and its nearness to commercialization, I think it is
2 something that we want to sort of continue to receive input
3 on from those that have thoughts about how to best structure
4 these solicitations, and the projects that we eventually
5 fund.

6 MS. SHARPLESS: I appreciate that explanation. I
7 know this is a difficult area and, having been at a previous
8 Advisory Committee Meeting where it sort of emphasized the
9 fact, "Why aren't you looking at loans more," I do realize
10 that there is a lot more involved in the loan process and
11 that the risk assessments are a higher level. And when you
12 look at moving money into arenas where you already have
13 facilities that are experiencing financial problems, I think
14 the State Treasury is going to have an interesting time
15 making those types of evaluations, particularly when I read
16 in the report that one of the business case justifications
17 for putting your money into these sort of idle plants is the
18 expectation that they are going to move along toward
19 different types of feedstock that will move us more toward a
20 higher level of global greenhouse gas emission reductions.
21 And so, when you add those two things together, idle plants
22 part of the market, government money coming in, and an
23 expectation of transition and change, it is going to be, you
24 know, a pretty tall order, and I think one that a government
25 is not necessarily always involved in when there is a high

1 risk factor involved. And I have noticed in this plan that,
2 when you go through the different program areas, there are
3 some areas that you have done a lot more of a sort of risk
4 analysis, a gap analysis, making decisions based on more
5 conservative investments; but, when we get to the biomass
6 and the biofuels, we are sort of over in the range of higher
7 risk, so I think, you know, if you are looking at a personal
8 investment portfolio, you want to invest in a lot of
9 different things to manage that risk, but I just would note
10 that this is probably one of your highest risk areas in the
11 Investment Plan, and one that - it can bring wonderful
12 benefits, or it can go the other way, what can I say? On
13 the hydrogen level, hydrogen infrastructure, you had a
14 current level of \$22 million, but I guess it is really \$19
15 million for the infrastructure, and then you are proposing
16 another \$14. So, my question here is, there was an Appendix
17 C in the report that showed clusters and where the greatest
18 impact of fueling concentrations should be. Is Appendix C
19 driving some of this funding level in terms of "this is
20 where we can expect to see this money spent," to guarantee
21 that you will have enough flow through's to make it
22 economic?

23 COMMISSIONER EGGERT: So, I will take a stab at
24 that and also invite staff if they choose to. Yes, the
25 answer is yes. For specifically the hydrogen investments,

1 there was a rather detailed market assessment which looked
2 at the deployment plans of the individual automakers, both
3 the timing, the quantity of vehicles, and the specific
4 regions with which those vehicles would be deployed, and use
5 that as the basis for the strategic investment plan. It is
6 also, if you look at the specific solicitation for this
7 first round, you will see that there is a very very heavy
8 emphasis and priority placed on where those stations get
9 placed, what types of capacities they have, the auto OEM's
10 are significantly empowered through the process of the
11 solicitation to help influence where those stations are
12 sited, and that will be the case for the next round, as
13 well. Actually, I would want to pick up on one point that
14 you made, which I think was another excellent one, and that
15 is sort of a general topic of risk. You know, I think one
16 thing that we are going to need your assistance on as this
17 program progresses is that we will have failures. You know,
18 if all these different investments were sure things, we
19 would not really have a role in this, you know, the private
20 sector would pick up the investment and we would all be able
21 to go back and spend more time on siting cases. But this is
22 going to be a balancing act and we do have definitely areas
23 where we are investing in high risk activities and projects
24 that have significant potential for high pay-off, but, you
25 know, they are not all going to be successful. And so I

1 think we are going to need - I think that speaks to how we
2 go about learning from those projects that are not
3 successful, in terms of informing future investment
4 strategies, and how we sort of communicate the benefits of
5 the program because, you know, again, some of those might be
6 somewhat visible. So, just to expand on your good point.
7 Tim will go next.

8 MR. CARMICHAEL: Thank you. Does a closed PON
9 mean that the money is out the door? And, if not, looking
10 at these two slides, what percentage, or what hard number of
11 dollars is out the door right now?

12 MS. ALLEN: A closed PON means that the period of
13 time to put in a proposal is closed. But the awards have
14 not been made. So, everything on the second page, the
15 second slide, the monies are not out the door; on the first
16 slide are the - so, the previous slide, these are the funds
17 that have been awarded.

18 MR. CARMICHAEL: So slide 5, the money is out the
19 door, these - coffers, if you will.

20 MS. ALLEN: Well, out the door in terms of a
21 Notice of Proposed Award.

22 MR. CARMICHAEL: Okay, thank you for that
23 clarification. One of the things that came up at the
24 Governor's Alternative Fuels Day and came up again at the
25 hearing that Commissioner Boyd testified at earlier this

1 week was a complaint from some of the businesses, some of
2 the sectors, that even after a Proposed Notice of Award, it
3 can be several months to many months before the award winner
4 actually gets the money. What is the explanation there?

5 MS. ALLEN: Depending on which solicitation we are
6 talking about, for example, with the ARRA solicitations, we
7 had to wait until DOE finished their agreement with the
8 recipient because our rule said that you had to have a
9 completed agreement, even to actually have received the
10 award from the Department of Energy. And so, it was not
11 that they were going to do anything, the projects were busy
12 finalizing those agreements. And then, in some cases there
13 were changes that were made to the DOE recipients. On a
14 couple of the projects, DOE changed their mind and they
15 decided to fund additional projects, and so we had to amend
16 our Notice of Proposed Award to pick up new projects that
17 had been funded, but they had a lender starting date, they
18 were not in the timeline at the very first Notice of
19 Proposed Award. With some of the other awards, there are
20 CEQA considerations and so, if a project is breaking ground
21 and requires an Environmental Impact Report, or Negative
22 Dec, then those things have to be done. Our regulations
23 require that to be done before we can go forward with an
24 award at a Business Meeting. And that, unfortunately, is a
25 long process.

1 VICE CHAIR BOYD: Jennifer, do not forget to add
2 the other ingredient, the public health effects.

3 MS. ALLEN: Oh, I forgot about that. We are also
4 required to post a localized health impact report for
5 projects that deal with infrastructure and that has a 30-day
6 posting, so we have to write the report, post the report,
7 and wait for public comment on the report, and then we can
8 go forward, and then after that, then we start looking at
9 what the timeline is associated with the CEQA requirements
10 would be with the project.

11 VICE CHAIR BOYD: This program is one of the most
12 process burdened programs I have experienced in my working
13 lifetime, so that is part of the dilemma, is why the dollars
14 do not go out the door. In many cases, quite some time
15 after people would have presumed they would, when we have
16 announced the award to recipients. But that is part of the
17 lessons learned and I do not know if there is anything we
18 can do about these things, certainly you cannot change the
19 CEQA rules. We may want to look at the guidelines that we
20 operate under, including the guidelines that ARB had to
21 produce for us with regard to some of these things, to see
22 if there is any way to cut to - I do not want to say
23 "eliminate," but to speed some of these processes up. But
24 right now, we are just beginning to look back at this to see
25 if there are any suggestions we can make.

1 COMMISSIONER EGGERT: Yeah, I think - and you
2 alluded to it in your opening comments. I think, you know,
3 looking at where there is sort of fixed duration
4 requirements, you know, and understanding whether or not -
5 so they are truly fixed if there are opportunities, and then
6 where there are sort of process issues, you know, making
7 sure that we are going through those in an expeditious
8 fashion. The other thing that we are learning, now that we
9 are actually getting money out the door, we are making
10 awards, we are getting contracts, I think we do have a much
11 better understanding of how long things take and where some
12 of the bottlenecks exist, and so, as part of this sort of
13 overall process review, we will be looking at where and how
14 do you take weeks, days. I mean, we recognize and we feel
15 the pressure that these programs are only beneficial to the
16 extent the money actually gets used, and so, you know, we
17 are really focusing on what I think has been something that
18 we heard from a wide variety of stakeholders, which is
19 trying to focus on how to make this process more efficient,
20 and getting that money to the folks that need it as quick as
21 possible.

22 MR. CARMICHAEL: One quick follow-up, Tim
23 Carmichael again, is that I think one of the - hopefully one
24 of the areas of improvement will be having done this once or
25 twice, you as an agency will be better able to communicate

1 to award winners what a realistic timeline will be, whereas,
2 they all want the money yesterday, but I think some of them,
3 whether there was poor communication, or hearing what they
4 wanted to hear, really thought they were going to get the
5 money right after the award announcement. Now, we know that
6 is not the case, and the better job the CEC can do in
7 communicating that to people that are applying, and people
8 that win, I think that will smooth a lot of the tension that
9 is out there right now.

10 VICE CHAIR BOYD: Barbara.

11 MS. HALSEY: Thank you. Barbara Halsey,
12 California Workforce Investment Board. The workforce
13 community has certainly appreciated the partnership that we
14 have been able to engage in with the Energy Commission over
15 the course of the past year. As I look at the awards list,
16 I am reminded that we are all concerned about how we would
17 leverage and effectively utilize our investments. I am also
18 reminded that we have an unemployment rate of 12.4 percent,
19 and that the workforce community through our education
20 partners and our workforce development partners, our
21 Employment Development Department, has access to a cadre of
22 talented individuals who are anxious to re-employ. So, I
23 would really be interested in working with the Energy
24 Commission in identifying, of the awards that have been
25 made, where those awards have gone, and where we anticipate

1 job creation to occur as a result of that money moving into
2 the sectors that it has been awarded to, so that we can
3 connect the talent pipeline from all of those California
4 residents who are currently unemployed to the job
5 opportunity that is represented in this investment.

6 VICE CHAIR BOYD: Excellent point. We should be
7 able to easily provide you with that information. I am sure
8 staff would be glad to do that.

9 COMMISSIONER EGGERT: And I was not at the
10 hearing, but I think one of the questions that was asked was
11 about the workforce development activities and -

12 VICE CHAIR BOYD: Yes, Simon Perez was interested
13 in that subject and asked for additional information, which
14 we have provided him, not quite the same as Ms. Halsey
15 referenced, but just the idea of workforce development. And
16 I would mention that, time is a blur to me, I think it was
17 last week, Mr. Olson, you and I joined others at an event in
18 Stockton where one of the companies in the electric vehicle
19 arena, who moved its operation from Mexico to California, to
20 Stockton, was celebrating an award of both workforce
21 development monies and an award from this agency with regard
22 to the production of electric vehicles, and the nexus was
23 quite obvious to the Press, and there were Legislators and
24 Congress people there who were interested in the fact that
25 California had done things like that, so I think the more

1 that we can point out and the quicker that we can get you
2 aligned with some of these, the better. So, excellent
3 suggestion. Now that the staff is catching its breath,
4 maybe we will do a little more of these. Any other
5 questions from Advisory Committee folks? Mr. Carmichael?

6 MR. CARMICHAEL: One other suggestion. A lot of
7 agencies and private companies wrestle with process
8 timelines. One thing that can be really helpful is for the
9 bosses to track that and monitor, you know, what is the
10 average timeline between award and distribution of funds,
11 and look for and demand, if you will, progress over time. I
12 assume at some level you are getting reports on that, but I
13 would encourage that to be one of the things that the staff
14 regularly reports to the Commission on, going forward, or at
15 least the Subcommittee, and I think it is relatively easily
16 monitored and is an important thing to publicize to critics.

17 VICE CHAIR BOYD: Well, let me assure you, we do.
18 Early on, Commissioner Eggert, who is now on the ARRA
19 Committee, so when I am battling for a higher priority for
20 consideration of 118 over other things in this agency, my
21 fellow member here has got to stand up for the ARRA
22 projects, but actually we apply in the 118 program a device
23 that the ARRA Committee initiated, Commissioner Eggert, a
24 flowchart that he and I review with the staff on a regular
25 basis and oftentimes it is kind of a reaction like that over

1 seeing bars move farther out as we deal with what the delays
2 are, or deal with, you know, the collisions that occur
3 internally. And that is a little small pipeline that is
4 referencing as we try to crowd the next project in, is it an
5 ARRA project, or is it 118? The good news is, ARRA is about
6 done with regard to that type of processing; we are not done
7 with it, we are encumbered with ARRA for years in terms of
8 incredible reporting procedures in it, but in terms of
9 processing grants and contracts in the future, not having to
10 deal with ARRA will help us speed things up, in addition to
11 all the other things that we are looking at to try to see if
12 we can come up with shortcuts and better ways of doing
13 things. But, appreciate you keeping the staff alerted to
14 the fact that that is why we ask these questions of them.
15 There is an interest out there.

16 MS. ALLEN: Are there any members of the Advisory
17 Committee that are online that would like to ask a question?

18 MR. COLEMAN: Yeah. Will Coleman from Mohr
19 Davidow. I am just trying to understand, in the prior
20 comment I think Jananne made, the comment about the hydrogen
21 fueling infrastructure that the current solicitation is
22 going out for, and in terms of the reasoning for that
23 amount, the \$19 million is, I think, the largest amount, the
24 largest award or solicitation going out to fueling
25 infrastructure. Is that correct?

1 MS. ALLEN: That is - well biomethane is \$22. The
2 fueling infrastructure portion of the hydrogen, the one that
3 is open fueling infrastructure, is \$19 million.

4 MR. COLEMAN: Right.

5 MS. ALLEN: And Manufacturing was \$19 million, so
6 it is among the top amounts, but it is not unique.

7 COMMISSIONER EGGERT: And I think for EV, if you
8 add in the ARRA dollars -

9 MS. ALLEN: Oh, much more, yes.

10 COMMISSIONER EGGERT: -- like in the \$30-40?

11 MS. ALLEN: Yes.

12 MR. COLEMAN: And I just wondered in terms of
13 deployment of AB 118 funds, that is the largest amount going
14 out to fueling infrastructure, is that correct?

15 MS. ALLEN: Not if you add in the AB 118 funds
16 that went into the ARRA projects, also.

17 MR. COLEMAN: Okay, okay. The amount - not
18 turning the ARRA portion of the funds, but the AB 118 funds,
19 going into those EV projects, is that correct?

20 MS. ALLEN: Yes, because with the EV portion, it
21 would have exceeded \$19 very easily. It would have been
22 closer to \$22.

23 MR. COLEMAN: Okay. But the comment was made that
24 part of the reasoning for the size of that solicitation is,
25 judging by the Appendix C or something? Is that correct?

1 MS. ALLEN: Is that correct? Yes.

2 MR. COLEMAN: So I was just wondering if you could
3 add a little more color to the reasoning behind that? I
4 think one of the questions is, how much - well, actually,
5 one of my questions - how many vehicles are currently on the
6 road that this solicitation would service? And what
7 capacity would we be servicing with a solicitation of this
8 size?

9 MS. ALLEN: I do not believe that I can answer
10 that. Pete?

11 VICE CHAIR BOYD: Mr. Ward, do you want to come to
12 your staff's aid?

13 MR. WARD: Good morning, Will.

14 MR. COLEMAN: Good morning, Peter.

15 MR. WARD: The question, does it from the appendix
16 that you referenced, and in the back there are the expected
17 deployments of fuel cell vehicles over the next several
18 years, and there are hundreds now, expected to be thousands,
19 up to -- I think it is 43,000 in the year 2015, so we are
20 trying to make sure that the stations that are allocated for
21 in the \$19 million will be adequate and in clusters, and
22 located with sufficient capacity with renewable hydrogen
23 capability and fast tracked, those are the various
24 additional incentives we provided in the solicitation so
25 that we can meet those needs as those vehicles are rolled

1 out over the next three to five years.

2 MR. COLEMAN: Is that so - you were referring to
3 Appendix C earlier, is the reasoning around the amount of
4 carbon reductions? Or the amount of time required in order
5 to implement this infrastructure and support future growth
6 in this sector? What was the reasoning outlined in that
7 Appendix?

8 MR. WARD: I think the rationale was, of course,
9 this is a pre-commercial demonstration that really is hosted
10 by California for the nation, at this point. There is no
11 more activity elsewhere in the country, this is where the
12 automakers have focused their deployments of vehicles, early
13 deployments in the pre-commercial phases, and it was thought
14 that we need to provide adequate infrastructure to not
15 hinder the progression of the numbers of vehicles that are
16 deployed. So we are very hopeful with the incentives, with
17 the dynamics that are provided in the hydrogen
18 infrastructure solicitation, that is one line, as well,
19 where we provided additional funding for additional capacity
20 at the station requiring 100 kilograms per day minimum
21 capacity required, 33 percent renewable, and requiring that
22 the stations do establish within two years, but we are
23 adding additional incentives for additional capacity for the
24 stations, branched up with the OEM vehicle deployments,
25 additional hydrogen content beyond the 33 percent standard,

1 and an additional incentive for those stations that can be
2 fast tracked to meet the needs of the vehicles that are
3 rolled out. I am confident because the industrial gas
4 companies have mentioned recently that they have had
5 reductions in their costs of equipment and the configuration
6 of the stations, so I think the funding that we have out
7 there - the proposal is due this Monday - will go a long way
8 to meet the fueling deficit that is perceived for the 2012-
9 2013-2014 timeframe. I hope that answers your question.

10 MR. COLEMAN: Yeah, I think - so I am just trying
11 to understand more a little bit the challenge that you guys
12 face in terms of how to deploy these dollars and the
13 effectiveness of those dollars. Obviously, there is a time
14 element to this, as well, which is there are certain
15 technologies that are moving forward more quickly than
16 others, and then there are obviously bottlenecks that you
17 have to deal with. And I understand that these were
18 allocations discussed in prior meetings, but I am just sort
19 of looking - I am sort of jumping ahead a little bit in
20 looking at how some of the dollars have changed in that
21 time, in other solicitations and where they come from, and
22 trying to sort of evaluate whether or not the dollars are
23 coming from the right places based on whether or not these
24 dollars are sort of being deployed in these current
25 solicitations to the most effective means, and so I guess I

1 am just trying to understand the total size of the hydrogen
2 solicitation and also the effectiveness of those dollars at
3 this point in time, as compared to some of the others. So I
4 will certainly reserve comment and wait. I think there is
5 going to be some discussion on how dollars have shifted
6 around in the next agenda item. Is that right?

7 MR. WARD: Yes, I think the changes that have been
8 made since the last Investment Plan draft will be discussed
9 then. Also, I would like to lean back on you, Will, from
10 the investment community, as you are, and I appreciate there
11 are short, medium, and long term investments. I think the
12 hydrogen solicitation comes under the heading for the longer
13 term commercialization of a technology and a fuel, so these
14 are - we are trying to hedge all our bets according to that
15 type of a continuum - short, medium, and longer term, and I
16 think hydrogen fits into the longer term, but we feel it is
17 a strategic investment that needs to be made now, according
18 to the input we have gotten from all the OEM's. In this
19 solicitation, we have tied the OEM's roll-out commitments in
20 a survey that the CEC and the ARB did to make sure that we
21 are adequately providing funding for the fueling
22 infrastructure as they have committed the vehicles. So we
23 are trying to go step in time in this early commercial
24 development and making sure that we meet the needs so that
25 there is no hindering of that progression to the march

1 towards commercialization on or about 2015.

2 MR. COLEMAN: Yeah, I can definitely appreciate
3 the long term need on this one. I think with all of these
4 technologies, and especially when you look at the
5 backcasting exercise with those done in prior rounds,
6 looking at what technologies are going to try to solve some
7 of these - actually get us to a - I think it is hard because
8 you have to get these things early. On the other hand, I
9 think that the thing I am struggling with a little bit is
10 that, when you look at the comparison of the amount of
11 dollars going into, say, E85 infrastructure, it is
12 significantly less. And when I look at the concentration of
13 the E85 vehicles, you know, I think there are over 400,000
14 in California at this point, and when I look at the cost of
15 additional E85 vehicles, it is miniscule, you know. And so,
16 I think in terms of - I think this process is under a little
17 bit of pressure, obviously, because of the budget issues
18 going on at the top level, but also there is urgency in
19 terms of how we support growth in the economy in the near
20 term. And so I think there is just sort of a question here
21 as to where the most effective dollar deployments are and
22 where the urgency should be. And so I am struggling a
23 little bit with deploying these dollars, the size of the
24 solicitation on hydrogen, giving the number of vehicles it
25 would actually service and given how long we are looking at

1 to deployment when you have other options for fueling
2 infrastructure which are more immediate. And also, just
3 looking, while we were talking here, I was scanning back to
4 the Appendices, and just even in terms of things like carbon
5 reductions, I think, if I am looking at these charts
6 correctly, you know, the cellulosic approaches to Ethanol
7 are still surpassed in any fuel cell projections that we
8 see, so I am just trying to understand what is the rationale
9 that is pushing us towards this size solicitation. You
10 know, we can talk about it more in the next -

11 MR. WARD: Sure. It is kind of about balancing
12 within balance, as a matter of fact, in this particular
13 area, so I do appreciate your input on this.

14 COMMISSIONER EGGERT: This is Anthony Eggert.
15 Actually, I think this is a good discussion and a lot of the
16 questions I have had for the Advisory Committee, including
17 yourself, Mr. Coleman, is, you know, thinking about again
18 what is the appropriate role of government, and we talked a
19 little bit earlier about the fact that we do have a modest
20 amount of funds. We are trying to effect transformation of
21 a very significant industry, and trying to understand both
22 sort of the magnitude and the strategy of investment with
23 respect to near and long term technologies. For example, a
24 few years ago you might have been able to make a fairly good
25 argument about the need to incentivize standard hybrid

1 vehicle deployment; I would say, currently, even though
2 those are being sold in very real large volumes, the need
3 for incentive has declined because of that fact. So, you
4 know, in terms of sort of the one example you mentioned,
5 E85, you know, what other types of investments, what is the
6 magnitude our dollars can help leverage what we know is
7 going to be needed if any of these are going to be
8 successful, which is a much much larger commercial
9 investment. So, I think, as we are sort of doing this
10 balancing, we are also looking at how close these things are
11 to commercialization, you know, what other players are out
12 there who are going to help facilitate the transition, you
13 know, where are the gaps? I think in the case of hydrogen,
14 you have billions of dollars of investment coming from the
15 auto industry, but very little coming from the
16 infrastructure side, so the gap there is seen as, you know,
17 there is a need for government to play some role in the
18 infrastructure. So, I will stop there.

19 MR. WARD: Part of this, too, is that we are
20 putting a marker down in this solicitation, due in Monday,
21 and so we are then going a long way to meet the needs of the
22 2012-2013, but in addition, the Air Resources Board is
23 reviewing - because their program is also looking at other
24 complementary policies that could assist this
25 infrastructure, so while we put a large marker on this year,

1 the subsequent years towards commercialization could be
2 taken up possibly with additional complementary policies, as
3 well.

4 VICE CHAIR BOYD: Thank you, Peter. Jennifer,
5 have you got much more in your presentation, or were you at
6 the end? I have lost track.

7 MS. ALLEN: That was the end of the presentation.
8 We were taking questions.

9 VICE CHAIR BOYD: Thank you very much. Bonnie,
10 you had a question?

11 MS. HOLMES-GEN: Thank you. Two quick comments
12 and a question. First of all, I did want to acknowledge the
13 tremendous amount of work, and I really appreciate it by the
14 Energy Commission, to try to work hard and get this funding
15 going forward and get projects funded, and I greatly
16 appreciate the work that has been done, I know we still have
17 solicitations out there and going out, but to the degree
18 that we can be building that list of projects that are
19 funded, and vehicles, technologies that are on the ground
20 because of this funding, it is incredibly helpful in
21 spreading the word, as we were doing earlier this week in
22 the Legislature, and to the public as to how California's
23 commitment to funding these new technologies and making this
24 transition away from petroleum really happen. So, I
25 appreciate that. Also, I just wanted to comment again that,

1 from the Lung Association's perspective, these investments
2 in electric and hydrogen fueling infrastructure, charging
3 infrastructure, are extremely important and a very high
4 priority for this program, so I know we will discuss that
5 more, but, in fact, we still want to talk about the
6 potential need for more funding in that area, especially for
7 electric charging infrastructure, but I think that it is
8 clear from our perspective, with the technology development
9 underway and the plans of the auto companies, as has been
10 mentioned, that there is a need to get these hydrogen
11 stations up and running and get this money out the door
12 quickly. And then my question is, with regard to the
13 ethanol production and the producer incentive program, I
14 think that it would be extremely helpful to have a little
15 more detail in the plan as to the conditions and the goals
16 for transitioning these facilities to the second generation
17 fuels. I know we have had a long conversation underway
18 about this issue and the goal of the \$6 million, this
19 solicitation, and then funding, and the next phase of the
20 plan, and the need to show that these facilities truly are
21 going to be transitioning to the next generation fuels and
22 show how this fits into the AB 118 goals to fund investments
23 that are moving toward the long term sustainable fuels that
24 we are going to be desperately needing as we move forward to
25 2050. So, I think that there is really not much detail in

1 the plan about the intention of the Energy Commission and
2 the commitments that will be required of companies that get
3 this funding to make that transition, and I think that would
4 be very helpful to have more detail about the timing and
5 what the Commission is expecting in return for this funding.
6 And also, it would be helpful to have a clarity about the
7 intention to do some more review of the actual GHG
8 reductions from those facilities because I think that is an
9 important aspect also because we are - our understanding is,
10 on the data you have collected is that, these facilities,
11 even with the existing feedstocks, are achieving a 20
12 percent relative reduction in GHG compared to convention
13 corn ethanol. So, it would be helpful to understand or to
14 know what the Commission's plan is to get more data if these
15 facilities are funded, as to what the actual GHG reductions
16 are that result in these facilities.

17 VICE CHAIR BOYD: I will take that as a comment
18 relative to the process. I would like to move us to -

19 MR. CARMICHAEL: Commissioner Boyd, sorry, I know
20 I have spoken a lot, but can I make one more quick comment?

21 VICE CHAIR BOYD: I am going to give you the title
22 now who talks a lot.

23 MR. CARMICHAEL: I deserve it, absolutely. In the
24 energy technology, somebody listening or watching texted me
25 to let me know that there is another important point

1 relative to the issue that we were discussing about awarding
2 and then actual money getting to the award winner. My
3 understanding from the text I got is that, today, in the CEC
4 process, an award winner is not allowed to start their
5 project after the award is made until they actually receive
6 the funding. To me, that does not make any sense at all.
7 And if that is the case, I would encourage you guys to take
8 a look at that, and even if there is, you know, some sort of
9 legal agreement that, if the project is topped for X number
10 of reasons, you know, that may impede the award, but to hold
11 up that project or, more specifically, to say that the cost
12 incurred before the money is actually received are not
13 eligible to be offset by the award, that does not make any
14 sense. And that is what I am hearing from one of our member
15 companies, is the current CEC process, and it is just not
16 logical.

17 VICE CHAIR BOYD: Jennifer, do you have any
18 comment on that? Or, if not you, Peter. That is kind of
19 news to me.

20 MS. ALLEN: I will have to repeat our legal
21 counsel's position. I will paraphrase it. The Notice of
22 Proposed Award is just that, it is a proposed award.
23 Anything can happen and either party can back out as a
24 result of various things, so until the signatures are dried
25 on the line, according to the agencies that control our

1 contracting process and the flow of money to and from the
2 state, and recent events, there really is no commitment for
3 the dollars until that occurs. And so that is the primary
4 reasoning.

5 VICE CHAIR BOYD: Well, I understand that and
6 historically we have always told people, you know, you will
7 not actually get your money, or the contract is not
8 considered complete until all the state agencies have done
9 their thing and all the processes have taken place, but it
10 has been my understanding that if somebody were to proceed
11 on their own, they are proceeding at their own risk, with no
12 guarantee of ever getting the state money. But I had never
13 heard of a prohibition against starting the process just
14 because they have not gotten the state money.

15 MS. ALLEN: And you are correct on that, and as a
16 matter of fact, there is one project, in particular that has
17 been allowed to go ahead and start on their CEQA process and
18 use whatever they are expending on CEQA dollars is matched
19 for -

20 VICE CHAIR BOYD: But it does not matter - I heard
21 you say they were allowed to - I would think anybody, I
22 mean, I would think we not even be in the chain or the loop
23 of saying yes or no; if they want to take a risk and spend
24 their own funds, that is their business, that is free
25 enterprise.

1 COMMISSIONER EGGERT: If I might -

2 VICE CHAIR BOYD: I hope our lawyers have not gone
3 that far.

4 COMMISSIONER EGGERT: -- right. Well, I mean, my
5 interpretation of the question, but correct me if I am
6 wrong, is if you do not yet have a signed contract and you
7 charge against that future contract for work done between
8 the time of perhaps the Commission meeting and the - I mean,
9 this is something for the lawyers to answer, and obviously
10 one question would be whether or not you could count it
11 against the match, but that is still their own dollars. I
12 guess the further question is, can you count it against the
13 state expenditure. And Peter, it looks like you might know
14 the answer.

15 MR. WARD: Our understanding is, prior to the
16 agreement being finalized, you are at risk of spending the
17 match, and you cannot expend funds that you are expecting
18 reimbursement on, so it is both, and all projects are
19 evaluated on the required match, and the match cannot be
20 expended prior to the agreement, otherwise that is at risk.

21 VICE CHAIR BOYD: Welcome to California's -

22 COMMISSIONER EGGERT: Is that - so the second
23 part, so you could spend money against the match at your own
24 risk, but the second part is, does that then change at the
25 adoption at the Business Meeting? Or do you just have to

1 wait until the finalization of the contract?

2 MR. WARD: Finalization of the Agreement. And it
3 cannot go to a Business Meeting until CEQA is cleared and
4 the local impacts are posted, so it cannot be heard before
5 the business meeting because of those requirements, as well.

6 MR. CARMICHAEL: I would encourage the Commission
7 to take a look at that. Again, this window when the Notice
8 of Proposed Award has been made, the company wants to get
9 the project started as quickly as possible, we, California,
10 want them to get the project started as quickly as possible,
11 and CEC appropriately protects itself if something out of
12 your control, or something really valid stops a project from
13 going forward, it still seems that, after the Notice of
14 Proposed Award is made, the CEC Award funds should be
15 eligible, assuming things progress, which I believe in 90+
16 percent of these awards, things go forward and it is just a
17 question of time, it is not a question of whether they go
18 forward or not. So I do not want to belabor this, but I do
19 think it seems to be a weakness in the system and it might
20 be corrected.

21 VICE CHAIR BOYD: Well, the more I hear of this,
22 the more I am painfully familiar with us having done battle
23 with the Chief Counsel and Chief Deputy Director of General
24 Services for most of the years I have been here over
25 contract processing, I do not care if it is our research

1 program or this. This may be far more an artifact of the
2 state rules and regulations, not the Energy Commission's
3 rules and regulations. We have battered ourselves bloody
4 over these kinds of - I consider - petty issues for a long
5 long time. We will look into this one because you brought
6 it up, and I hope there is something we can do, but based on
7 my experience, I bet this has nothing to do with our lawyers
8 and everything to do with the control agency lawyers. In
9 the last five to 10 years, the rules of government and the
10 contract processing have gotten more and more and more
11 severe and strict, instead of less. So, to me, they looked
12 at the wrong boxes to blow up, but that is just a

13 MR. WARD: It is the state requirements right now,
14 this is one of the most frustrating parts of administering a
15 program like this. We really would like to have the money
16 on the street as soon as possible, but it seems to be that
17 there are continuing layers of process that have been added,
18 so we encourage any dialogue we can get to streamline this
19 process with the help of our Advisory Committee, as well.

20 COMMISSIONER EGGERT: And I guess I just want to
21 just touch on the one point that has been brought up, and I
22 am sure it does not sort of satisfy the request or the
23 desire, but, to the extent that there is the possibility to
24 count match against basically your expenditure as part of
25 the project for the purposes of the match, that sounds like

1 there is at least a window there, you know, that might allow
2 some forward progress.

3 VICE CHAIR BOYD: Okay, were there any other
4 Advisory Committee member comments or questions? We are, if
5 you looked at the agenda, an hour behind, but in reality, as
6 I look at the agenda, we have begun to smear together a
7 discussion of the current plan, key changes in the proposed
8 plan, and even remarks.

9 So, at this time, I would like to introduce Pat
10 Perez, who is going to speak to the key changes in the
11 Committee Draft, as the agenda says, in effect, continue the
12 discussion that we have started. And I would like to
13 introduce - Pat is the newly appointed Deputy Director in
14 charge of the Transportation Division and therefore in
15 charge of this program, and Pat was newly appointed to
16 replace the recently retired Deputy Director, Mike Smith,
17 who is sitting in the back of the room, still, as far as I
18 am concerned, far too young to retire, but in any event,
19 Mike has done yeoman duty and we pulled him back as a
20 retired annuitant to continue to help us a little bit. But
21 Pat Perez was recently selected to take Mike's old job and
22 Pat is a veteran of this organization and a veteran in the
23 transportation area with lots of other accrued skills in the
24 years that I have been here, so welcome aboard, Pat. This
25 is maybe your first real public unveiling.

1 COMMISSIONER EGGERT: And if I could just jump in,
2 two quick comments. I just want to thank Mike, who I have
3 gotten to know also through this process, who I think has
4 been a tremendous contributor to the efforts of this program
5 to help form it and develop a team that has successfully
6 delivered the program that we have before us today, and
7 then, with Pat, it was very bittersweet because, previously,
8 he was absolutely essential and instrumental to the
9 execution of the ARRA Program, which is, as Commissioner
10 Boyd had mentioned, the other committee that I serve on, and
11 that committee was very - was not terribly happy to lose his
12 services, but I get to change hats and now be extremely
13 happy - no - that a great new leader that is going to help
14 take this program forward into the next level.

15 VICE CHAIR BOYD: So, Pat, we expect great things,
16 obviously.

17 MR. PEREZ: Well, good morning to our volunteer
18 Commissioners, first of all, and to the Advisory team, and
19 our valued stakeholders, and certainly all the staff, who
20 have contributed to this plan so far, and I guess I have
21 been in this job now for three weeks and, of course, one of
22 the first things that I did while moving down to the Fuels
23 and Transportation Division, and probably one of my best
24 decisions, was to sign the paperwork to make sure that Mike
25 Smith could not retire, because I will tell you, he has been

1 critical in helping with this transition. So, with that,
2 what I would like to do is go over some of the changes to
3 the draft plan based on all the input that we received from
4 previous workshops, as well as the written and oral comments
5 that we received in June. I want to also acknowledge that,
6 indeed, we have received additional comments that we will
7 take under consideration as we fine tune this plan and
8 return it back to the Committee next week, and submit the
9 final report for consideration at the August 11th Business
10 Meeting. What I think I will do first is just kind of, for
11 those of you who have copies of the plan with you, you may
12 want to follow along, I will in some cases cite to
13 individual pages on where some of the more notable changes
14 are, and cover a broad array of substantive, as well as
15 minor edits that may be significant in terms of improving
16 the document, so I want to just acknowledge right up front
17 and thank all of you for the comments you have provided.

18 So, with respect to some of the general changes,
19 the big noticeable change, of course, is that we have added
20 an Executive Summary, which provides a brief outline of the
21 Investment Plan, as well as the funding allocations for the
22 Investment Plan. In the main document, for each fuels
23 section, we have added additional information from our
24 recent funding solicitations that Jennifer just talked
25 about, as well as the agreements that we have secured to

1 date. We have also reduced some of our funding allocations
2 to incorporate a \$5 million category called "Federal Cost
3 Sharing." We believe this new funding category will be
4 extremely important to provide this Commission flexibility
5 to take advantage of upcoming federal solicitations, so that
6 we do not have to sit around and wait for the delays that we
7 currently experienced with the American Recovery and
8 Reinvestment Act, waiting for the outcomes of the Federal
9 Solicitations. So, we will have at the beginning of this
10 Investment Plan money that is set aside so that we can take
11 advantage for any cost sharing opportunities in the future.
12 And, as a minor detail, we have changed two of our section
13 titles to more accurately reflect the technologies involved,
14 the content of the sections is essentially the same, but the
15 titles are a little bit more descriptive.

16 Regarding the section on Battery Electric Drives,
17 first, in the Battery Electric Drive section, we have
18 incorporated projections with the Plug-In Electric Vehicles
19 in the coming years. As you will see, on page 30, there is
20 a steadily accelerating trend in the number of plug-in
21 electric vehicles that we expect to be on the road over the
22 next 10 years.

23 With respect to the light-duty vehicle retrofit
24 subsection, it has been integrated into a broader category
25 now called the "Light-Duty Vehicles" subsection.

1 Originally, we expected that these retrofits might be a
2 necessary bridging technology towards the original equipment
3 manufacturers or deployment of plug-in electric vehicles,
4 however, OEM's have been moving a little bit quicker than we
5 expected and that is why we have updates there.

6 In the Charging Infrastructure section, pages 35
7 to 41, in that subsection, we have made a number of
8 revisions, first, we have tried to address the rapid growth
9 of plug-in electric vehicles in our analysis of charging
10 infrastructure needs, and in that analysis, we have
11 incorporated an expectation for roughly one home charger for
12 .3 public chargers for each vehicle. We have also accounted
13 for more than 4,000 residential and public charging stations
14 funded by our program, so far, which we will be helping to
15 coordinate throughout the state. However, even with this
16 head start, if you look at the anticipated vehicle
17 deployment levels, you can see that we still have a way to
18 go. And finally, we have added language addressing concerns
19 over encouraging off-peak charging and integration of Smart
20 Grid technologies.

21 To a topic that has generated much discussion this
22 morning on the Hydrogen Electric Drive section, we have
23 included the results of a new survey by the California Fuel
24 Cell Partnership, the results of this survey are similar to
25 the Joint Energy Commission/Air Resources Board Survey, both

1 of which are listed on page 46. Both surveys suggest a
2 steady increase in fuel cell vehicles through 2015, and a
3 rapid increase in vehicles from then, out to the year 2020.
4 We have also clarified that we may provide funding for
5 fueling infrastructure for non-road applications, with the
6 expectation that such infrastructure would also publicly be
7 available for on-road vehicles. The infrastructure
8 subsection also includes a deeper discussion of our current
9 solicitation for hydrogen fueling infrastructure that we
10 discussed a few minutes ago, which ends on Monday. The
11 results of the solicitation will help us identify how to
12 prepare future hydrogen fueling infrastructure
13 solicitations, that Peter and Jennifer just summarized.
14 And finally, with respect to this category, we have updated
15 the fueling station information on the tables in Appendix C,
16 which provide the foundation and support for what is in the
17 chapter, and the tables now reflect the limited availability
18 of certain stations, as well as the expectation that certain
19 stations will be unavailable once their period of committed
20 funding ends.

21 Moving on to the section on Gasoline Substitutes,
22 we have made a number of revisions to basically emphasize
23 our openness towards some of the non-Ethanol gasoline
24 substitutes by also acknowledging that we are going to
25 continue to pursue Ethanol, but we certainly expect that

1 Ethanol will continue to play an important part of our
2 future transportation fuel future, but we also want to
3 acknowledge and highlight other possible gasoline
4 substitutes, so we have integrated that into the section as
5 new opportunities emerge, so that we will be able to take
6 that opportunity and hopefully translate it into a program
7 that leads to long term benefits.

8 With respect to the E85 dispensers, we have
9 decreased our funding allocation there from \$8.5 million
10 proposed, down to \$6.5 million. This is aligned with our
11 intent to establish the new federal cost sharing category
12 that I just mentioned a few minutes ago. However, we
13 believe that the remaining allocation will still allow us to
14 make inroads with expanding the E85 network throughout
15 California.

16 We have also clarified the \$10 million allocation
17 that will go towards extending the gasoline substitutes at a
18 number of levels. This will cover funding for the
19 continuation of the California Ethanol Producer Incentive
20 Program, funding for pre-planned development activities, and
21 funding for the construction of new and retrofitted
22 production facilities throughout California.

23 Moving on to Diesel Substitutes, in this section,
24 we have made minor changes to clarify that our
25 infrastructure funding is intended primarily to support

1 domestic and in-state diesel substitutes and feedstocks. In
2 previous versions of the report, as you may recall, there
3 had been questions as to whether we would provide funding to
4 support importation of feedstocks and diesels with what we
5 call questionable sustainability benefits. In this version,
6 we have tried to clarify what our intention is. Also, we
7 have reduced the funding for the diesel substitutes
8 infrastructure section from \$5 million down to \$4 million.
9 This, too, is aligned with our intent to support the federal
10 cost sharing category, so that we can capture federal
11 opportunities that come down the road in a timely fashion.

12 With respect to Natural Gas, we have expanded our
13 funding for natural gas vehicles to include light-duty
14 vehicles. This was based on input that we had received from
15 a number of sources indicating that the original equipment
16 manufacturers would be expanding the availability of light-
17 duty natural gas fleets in the coming years. And there may
18 be an opportunity to have the Air Resources Board, as an
19 adjunct to its Clean Vehicle Rebate Program to administer
20 incentives funded by the Energy Commission for these light-
21 duty vehicles. So, certainly something to consider.

22 Also, moving on to the medium- and heavy-duty
23 vehicles, we have also adjusted stated carbon intensity
24 estimate for LNG, which is reflected in Appendix A of this
25 proposed draft report. This change is intended to reflect a

1 more realistic well to tank pathway for liquefied natural
2 gas. In response to incorporating the light-duty natural
3 gas vehicles, we have increased our overall funding of the
4 natural gas vehicles from \$12 to \$13 million. Funding for
5 biomethane production projects was reduced from \$10 million
6 to \$7 million to provide additional funding for natural gas
7 vehicles and to also expand and increase the funding in our
8 federal cost sharing component.

9 With respect to propane, no significant changes
10 made there.

11 With respect to Innovative Technologies and
12 Advanced Fuels, we have added the possibility of funding for
13 low carbon intensity aviation fuels because that sector of
14 our economy continues to expand and grow at a rapid pace.
15 We expect this might represent a significant opportunity for
16 achieving some of our greenhouse gas reduction goals from a
17 source that all too often gets overlooked. Additionally,
18 based on renewed interest from certain sectors of the fuels
19 industry, we have also added renewable methanol fuel to our
20 list of potential areas of interest to consider as we move
21 forward. As mentioned previously, we also added the new
22 category, Federal Cost Sharing, to this section, as well,
23 and allocated \$5 million overall to help capture the federal
24 funds.

25 With respect to Market and Program development and

1 the last section, as you may recall, this section consists
2 of a number of categories, you know, ranging from workforce
3 development and training to standards and certification, as
4 well as sustainability studies, and program marketing and
5 public education and outreach.

6 And finally, technical assistance in environmental
7 market and technology analysis. For this section, we have
8 made two significant changes to this report that were not in
9 the previous draft that you reviewed. First, we have
10 included potential funding for the University of California,
11 Davis' Sustainable Transportation Energy Pathways Program.
12 This is a program that can provide spatial information on
13 alternative fuel demand and, as well, as the lowest cost
14 means for alternative fuel distribution pathways has been
15 added. And secondly, an extremely important and mentioned
16 earlier by our Commissioners, the importance of measuring
17 progress through a Measurement Verification and Evaluation
18 component that is going to be critical to look at our
19 progress in meeting our long term goals with respect to
20 reducing greenhouse gas emissions, petroleum reduction, as
21 well as other air quality benefits and energy efforts. We
22 need to be able to document and ensure that these programs
23 are delivering the benefits that they were intended for.
24 And so, we have added a component there and I think this
25 will also help us to identify successful funding strategies

1 and techniques for the future, as we make investment
2 decisions, moving into the next Investment Plan. So, with
3 that, I think I will close my remarks. I do have many of
4 the technical staff here today, if you have any questions
5 regarding the proposed changes. I would also like to
6 recognize, again, that we have received additional comments
7 to the docket from many of you that were not incorporated in
8 the listed changes just now proposed. This reflects changes
9 that we made in the report that was issued on July 2nd, so it
10 is basically reflecting much of the valued input that we
11 received from the Advisory Committee, stakeholders, and
12 those of you who were listening in today. So, with that, I
13 will turn it back to the Committee.

14 COMMISSIONER EGGERT: Thank you, Pat.

15 VICE CHAIR BOYD: Questions, comments?

16 MR. [unidentified speaker]: I have got some
17 comments and questions on the phone when you are ready.

18 VICE CHAIR BOYD: Barbara, is your name card up
19 for - no, that is the last one, okay. I see no - oh, Tom?

20 MR. CACKETTE: Is this the section where you want
21 Advisory Committee comments on the plan, then?

22 VICE CHAIR BOYD: Questions, comments.

23 MR. CACKETTE: Okay, you want me to go, then?

24 VICE CHAIR BOYD: Sure.

25 MR. CACKETTE: On ARB's part, we certainly also

1 want to acknowledge the hard work that your staff has put
2 into this plan. I think it communicates very well what some
3 of the priorities are and the rationale, Pat's presentation
4 was excellent in terms of the rationale for the changes that
5 occurred. And I think we all agree, as has been made
6 comment to, that in these economic times, getting the money
7 out there and getting things started as fast as possible is
8 a noble goal, but unfortunately I have to agree with you in
9 terms of some of the delays that Tim is talking about, are
10 the arcane and antiquated and irrational state system for
11 doing contracting, so we experience the same problems that
12 you mentioned, Jim and Anthony. On the charging
13 infrastructure, you know, I think we definitely support the
14 concept that you need to look at what the market might
15 create in terms of vehicles and then match the
16 infrastructure to support them. That is most critical on
17 the hydrogen side and other areas where the fuels that the
18 vehicles need, if they are not there, you cannot sell the
19 vehicles, so it is a chicken or egg type situation. I
20 think, on the electrical infrastructure, we need to watch
21 that very carefully because there is a lot of money being
22 spent at the Federal level, as well as through 118, to look
23 at what type of infrastructure do we really need, and I
24 think it is yet to be decided whether home infrastructure is
25 pretty much all you need, whether workplace infrastructure

1 would expand the number of opportunities for people to buy
2 battery electric vehicles, plug-in electric vehicles,
3 because it could make it - the electric vehicle's limited
4 range could have more utility if there was a business place
5 charging where you park, and then the question about quick
6 charging and other opportunity chargings, I think, is still
7 out as to what the benefit of that is. And so some of these
8 studies, particularly the ones in San Diego with Nissan
9 vehicles, I think, will be illustrative of how to approach
10 the future investment plans for electric charging. The
11 other good thing about this is, I think that we have got a
12 pretty good split here where ARB's funding the incentives
13 for vehicles out of our pot of money and you are matching
14 that infrastructure funding to assist in that area. There
15 is one area that I would like to suggest a change for in the
16 plan, it is a minor thing, but I think of significance. And
17 it has to do with the most common theme we get back from
18 auto industry and other fueling folks is that there is a
19 need for a consistent signal, and that goes to the public,
20 too, is going to be the people who buy these vehicles and
21 either make them successful or a failure, and it is very
22 hard trying to figure out exactly how much money we have and
23 whether incentives for vehicles will be sufficient to match
24 the uptake of vehicles by consumers. And we have put
25 forward \$5 million this year for battery type vehicles, zero

1 emission type vehicles, and we have about \$4 million
2 leftover from last year, so we have got a pot of money, but
3 looking at the fairly aggressive introduction plans of some
4 of the car companies, I am not sure we will even make it to
5 next July before that money is gone. And so, in the draft
6 plan, there was this, I thought, very wise statement that
7 says the Energy Commission will consider a reallocation of
8 funds to augment ARB's efforts to provide vehicle
9 incentives, if needed, and that has mysteriously disappeared
10 from the Final Draft, and we would like to just ask that it
11 go back in there because I think it would be a real bad
12 situation if the customer at the dealership, we have got
13 advertising going on, incentives are available at the state
14 level, and they are available in January, February, March
15 and April, and all of a sudden in May and June, they dry up
16 and we start them up again in the next year. That is not a
17 consistent signal for making people want to buy these
18 vehicles. So, just those words that offered at least that
19 opening would be appreciated if they were back in the plan.
20 Finally, Pat mentioned that, since we do run a program for
21 vehicle incentives out of the ARB side, that you might want
22 to add light-duty CNG vehicles in there. We have not put a
23 priority on that, but I think it is certainly worthwhile
24 doing it if you want to send the money our way and just
25 include it in that program, we would be glad to help you

1 with that. That is all the comments we have now. Thank
2 you.

3 VICE CHAIR BOYD: Thanks, Tom. Thanks for backing
4 me up on the arcane system. Two old-timers here. Other
5 comments at the table, and then we can catch the people on
6 the phone. Mr. Carmichael?

7 MR. CARMICHAEL: So, thank you. Let me start by
8 saying, I am totally disappointed that you did not hear the
9 Advisory Committee members' request to double the funding in
10 this program between the last meeting and this meeting, and
11 more seriously, I am glad that we are still talking about
12 \$108 million. A genuine thanks to the staff and the
13 Commissioners working on this for listening to our sectors
14 requests over the last few months to dedicate more funding
15 to vehicles, including the light duty, you know, though it
16 is \$2 million less than it was a month and a half ago, it is
17 a better allocation of those \$22 million related to natural
18 gas. And we appreciate, you know, the interactions with
19 staff and Commissioners on how we think these funds can be
20 used most effectively.

21 This comment focuses on the natural gas section,
22 there is a \$13 million proposed allocation to vehicles.
23 That is not broken down any further, it is a lump for light-
24 duty, medium-duty, and I am curious what the thinking is
25 among the CEC staff at this point on how a further breakdown

1 of that is going to be made, or do you have it and you just
2 did not put it in the plan? Is it going to be a third, a
3 third, a third? Or, when will that sort of decision be
4 made? Is it going to be based on what sort of proposals you
5 get? It would be helpful to know that.

6 COMMISSIONER EGGERT: So just a quick comment. I
7 do not think we do know the specific breakdown yet, and
8 actually this relates back to some of the input we have
9 gotten over the plan development, which is the relative
10 advantage of being specific or general with respect to the
11 allocations within the categories, sort of how farther down
12 do you parse it. And I think, in this case, there was a
13 decision at some point to leave it in the broader category
14 of the vehicle, so I think, you know, as we move forward
15 towards the development of the solicitation, you know, we
16 would be interested in further input as to what the
17 community thinks is the best possible strategy for the
18 relative contributions to those.

19 MR. CARMICHAEL: We will be happy to weigh in, I
20 am sure others have opinions, as well, but we would be happy
21 to give additional feedback on that. We also appreciate the
22 corrections that were made, you know, some technical or
23 detail adjustments that have been made, we appreciate that.
24 On process, and back to that earlier theme of distributing
25 the funds more quickly, I really - I had spoken with staff

1 yesterday of the MCC [phonetic], I really like the idea of
2 the - if one agency has already gone through the process of
3 vetting a subcontractor to handle a piece of this process,
4 the other agencies should take advantage of that. And I
5 think that is the case, as Tom Cackette just highlighted,
6 where there is an opportunity for ARB - or for CEC to use a
7 contract, and ARB has already identified it has under
8 contract, you know, to help with a piece of the distribution
9 here. So much of the proposal or the offer that was made
10 earlier about the propane sector, I would like to know more
11 about where the CEC could use some help, our organization is
12 also a (C)(6), and we are not the only (C)(6) nonprofit out
13 there that I think would be willing to help if there is a
14 way we can help in distribution. I personally do not want
15 to be making the decisions on who gets the money, but if
16 there is a process role to help CEC get information out, get
17 information in and get money out, we would love to help with
18 that and would love to talk more about how we can help with
19 that.

20 And I do not want to limit, just to be clear, my
21 comments about collaboration between ARB and CEC, and
22 frankly, other state agencies, when it comes to taking
23 advantage of contractors or staff that are already working
24 on something, that comment was not just limited to this
25 light duty piece, I think we should be looking at those

1 opportunities across this entire program - R&D, you know,
2 all the different aspects that you guys in some sense are
3 silo'd today, and really there is not a good reason for
4 that. On the process, one of the things that I learned a
5 few weeks ago in working with members of the advisory
6 committee and people following this process to help defend
7 the AB 118 funding in the Legislature is, for all the people
8 that were willing to speak up and say, "This money is
9 incredibly important, and we greatly appreciate that the ARB
10 and the CEC have processes separate from the Legislature,"
11 many of the people that are your biggest fans have a lot of
12 good ideas for how to improve the process, going forward,
13 and I know we are going to be moving quickly into the next
14 cycle, and I just want to encourage you as an agency, staff
15 and Commissioners, to take time, solicit input, you know,
16 going forward, on how to improve the process. And, put
17 another way, just because people were very willing to
18 support the protection of these funds does not mean that
19 they think that everything is going quickly right now with
20 this program. And there are opportunities for improving the
21 evaluation process, the selection process, the allocation,
22 and distribution. And you have got a lot of good people
23 that are ready in the fold, if you will, that I think can
24 give some good feedback. I know because I got that feedback
25 along the way in the effort to defend the overall program.

1 And finally, if I heard one thing from the Legislators and
2 their staff that would be really helpful going forward, is
3 better communication from the CEC to the Legislature,
4 especially on updates, on how things are going, what is
5 working, what is not working, and if changes are made, what
6 changes are made and why were they made. And I know that
7 Commissioner Eggert, among others, heard that same feedback,
8 but it is an important piece and, frankly, it is just a good
9 way to operate, and it is important for the sustainability
10 of this program, going forward, that this agency do a better
11 job on that piece. And those are my comments. Thank you.

12 COMMISSIONER EGGERT: Actually, maybe just a quick
13 comment. I greatly appreciate those comments and I think
14 they are well received, and I think I just want to also
15 reiterate the gratitude that Commissioner Boyd expressed at
16 the outset of the activity of our Advisory Committee
17 members, a number of key stakeholders who did work very very
18 hard to communicate the benefits of this program to the
19 Legislature over the last several months. And I think, kind
20 of as we go forward towards the final adoption, sort of the
21 recognition that we have the opportunity to sort of solicit
22 this critical and constructive input on an ongoing basis, to
23 continuously improve our processes, the strategy that is
24 being applied to the funds, and the communication that we
25 have with the outside world, and so I appreciate - yeah, I

1 guess I just want to say I appreciate the work that has been
2 done and look forward to continuing that dialogue, and I
3 think we have been here throughout that process, one of the
4 key elements which you highlighted, which is the need to
5 communicate even more the benefits of the program or
6 process, all of that, I think, is going to become more
7 inherent in the program.

8 VICE CHAIR BOYD: Well, I will thank Tim for his
9 comments, as well. Tim and I go back quite a long ways and
10 we have served on the other not-for-profit Boards, and have
11 learned how to bounce off of each other. I appreciate your
12 comments, Tim, and some excellent thoughts there in the
13 lessons learned discussion we have already started around
14 here. And I will mention something that I was saving for
15 later, kind of like concluding remarks, but it seems pretty
16 apparent that there will be some legislative instructions to
17 us relative to this process, as a result of all the
18 discussions and dialogue going on, that have gone on and
19 continue to go on across the street, relative to financial
20 issues, the budget, in particular, and it is likely that -
21 highly likely - that the Legislature is going to insist on
22 seeing the Investment Plan at the time the Governor submits
23 the budget to the Legislature, or at least a Draft
24 Investment Plan, and then a more finalized Investment Plan
25 concurrent with the May revise, that that is entirely likely

1 - not guaranteed yet, but those kinds of discussions are
2 going on. The only reason for bringing it up, it just means
3 that, shortly after we dismiss today's meeting, you will be
4 getting an invitation to start the next process, even
5 earlier than we started it in the past, so we have products
6 to meet the needs and the wishes of the Legislature. It is
7 all a product of this need to communicate better. I shudder
8 a little, though, always, as to whether other people want to
9 insert their ideas of how these monies might be spent, that
10 is different from the collective genius that we accumulate
11 in this room and in this effort to put this investment plan
12 together, but that is the way - welcome to Sacramento. In
13 any event, we will have to step the process up for the next
14 time period and, so, we probably will be looking to a lot of
15 you for ideas on dealing with that process, doing a better
16 job of communicating. I know people would like feedback
17 from us, and actually the staff is debriefing folks who were
18 not successful in a lot of these processes, but it seems
19 that is not very well known because I keep hearing more - I
20 am getting e-mails about people would like a debrief, well,
21 we have a standardized debrief process, we have got to
22 obviously advertise a little bit more in the future, but in
23 any event, there is an opportunity to raise that issue.
24 Tom, you look like you -

25 MR. CACKETTE: Yeah, I just wanted to add a quick

1 comment on that. This is stating the obvious, but if that
2 happens, if you are getting into the Investment Plan matches
3 up with the Governor's release of the Budget, and then they
4 revise, I think it is obvious that the one risk of that is
5 that they will look at a previous Investment Plan and ask if
6 the money has been spent, so I think it really emphasizes
7 the need to get the dollars out the door as soon as
8 possible.

9 VICE CHAIR BOYD: Some of us are painfully aware
10 of those consequences. Bonnie.

11 MS. HOLMES-GEN: Thank you.

12 VICE CHAIR BOYD: And then Mark, and then Barbara,
13 and then Jan, and then the telephone.

14 MS. HOLMES-GEN: Okay. I have a couple of
15 comments on this plan, and then a comment about moving
16 forward. And, on this plan, as I mentioned, yeah, I
17 appreciate the tremendous amount of work, I think you have
18 got a good, sound product moving forward, and I have
19 questions about a couple of categories I have raised.

20 VICE CHAIR BOYD: Bonnie, is your mic on?

21 MS. HOLMES-GEN: I think it is on - okay, all
22 right. But one question, I continue to have a concern about
23 whether there is enough funding in the electric drive
24 category, especially for infrastructure. And I am
25 wondering, I think that has been raised a couple of times

1 and it was raised in public comment last time, so I guess I
2 am wondering what the response is to that concern. It
3 sounds like the response is that the Commission will
4 continue to evaluate that as we move forward and that there
5 could be some possibility for us in between categories, if
6 needed, for the next year. Is that the response?

7 VICE CHAIR BOYD: Well, I mean, to be totally
8 candid with you, I think the collective wisdom that results
9 in the amount of money that is there now is the best that a
10 lot of expertise could come up with in terms of knowledge
11 about planned roll-out of vehicles and production quantities
12 and the area, you know, the geographic location of some of
13 the early demo programs, and what have you. We - many folks
14 - have been quite cognizant of the fact that this, you know,
15 electric vehicles are catching on big time, as Mr. Cackette
16 had indicated, pleasant surprises to a lot of us, there is
17 an activity underway now to create an electric vehicle
18 collaborative of all the folks in the auto industry,
19 utilities, other stakeholders, to get together and talk
20 about this whole situation and try to get a good handle on
21 what the future might be that will help guide a lot of
22 people in terms of the activities they undertake. I am
23 reminded of Tom's comments about the division between home
24 recharging and what we call "opportunity charging," you
25 know, charging in the business place, and I am also

1 cognizant of a lot of allegations made, that, "How could you
2 be spending the money you are scheduling in your Investment
3 Plan when you have already said you need to do more
4 planning?" Well, as I said, we said we think we know what
5 is happening in the very near future, we need a better idea
6 what is happening in the long term future. We have had a
7 plug-in hybrid electric vehicle research advisory group for
8 three years that has had utility membership, as we worry
9 about utility generation transmission distribution systems,
10 and the utilities still are working on that. We had a real
11 concern about the balance between opportunity charging and
12 home charging because all the estimates to date for the
13 demands on the electricity system are heavily predicated on
14 home recharging - off peak charging. And so, there are a
15 lot of questions that need to be looked at, that everybody
16 acknowledges need to be looked at, and are looking at we
17 want to continue to look at in a far more collaborative way,
18 so that we can plan the future more exactly than we have
19 in the past. But, I think we are up to - we think we have
20 got these first, now, three periods, the Fiscal Periods,
21 reasonably well covered to meet the need that we have seen
22 identified. What we do not know, of course, is the public
23 acceptance of the manufacturers' roll-out, and how many
24 vehicles we will be having to accommodate; we need to know
25 when this turns over from something government needs to

1 incent, to business cases made, and a lot of people sitting
2 out there take over as part of the businesses we need to
3 know, and the PUC and the CEC have been working together on
4 their project to deal with the investor-owned utilities on
5 what the electric vehicle charging infrastructure needs
6 might be, or more so, what the generation and distribution
7 of transmission needs might be in the future. So, there are
8 a lot of balls in the air. We think they are all under
9 control for the time being, and a lot more work will take
10 place.

11 MS. HOLMES-GEN: Well, I appreciate that. One
12 thing I am thinking is that I know there are a lot of balls
13 in the air, and there are a lot of discussions going on
14 between the CEC and ARB and PUC about these issues, and a
15 lot of planning going on, and maybe - I think it would be
16 helpful to have an update as we move forward in the next
17 Advisory Committee process about those plans, and what is
18 being done to develop a statewide vision for what is needed
19 in that EV charging area, what kind of plans have already
20 been done in some local areas, and how we bring those
21 together into a statewide vision or plan for EV
22 infrastructure.

23 VICE CHAIR BOYD: You are right. A lot of that
24 local planning that has been done is what has given us
25 guidance on what the current needs are for local

1 demonstrations and local roll-outs, and I think our
2 activities to date in financing charging infrastructure have
3 mirrored and reflected on and built on, the planning that
4 has been done. So people who say no planning has been done
5 are not correct in their thoughts about, "Well, why do you
6 need that amount of money? You don't have a plan." There
7 have been plans. We have built the foundation, now we need
8 to build the rest of the structure.

9 COMMISSIONER EGGERT: And if I might just add, we
10 had a tremendous gift, or opportunity provided to us in the
11 context of the ARRA, the funds that were coming to us in the
12 transportation and electrification category, I am noting
13 here on Table 3, I know this is not just the infrastructure
14 piece, but, you know, there is well over \$100 million that
15 was provided to California in that category, of which I
16 think AB 118 money was on the order of about \$50 million for
17 the infrastructure portion matched against - again, I do not
18 have the numbers in front of me, but it is in the tens of
19 millions of dollars of ARRA funding - and that is an
20 enormous down payment on what we think is needed for sort of
21 this first wave of vehicle deployment. I would note that I
22 am very bullish on EVs, but I think we are going to sort of
23 see how this market develops over the next year. We have
24 sort of the stated projections from the OEMs about how many
25 will be deployed, and we can make some estimates of how many

1 we think might end up in different parts of the state, and a
2 lot of that, I think, sort of went into sort of the early
3 planning that helped form the basis of the partnerships that
4 now exist among the infrastructure providers, the utilities,
5 the local governments that are going to be actively
6 deploying infrastructure for those projects. So, I think
7 the combination of that very large sort of down payment, the
8 activities that we are going to be undertaking this year in
9 terms of evaluation planning and, you know, bringing these
10 different stakeholders together to come up with the next
11 step in our strategy, I think, is going to be very helpful.
12 So, it does look like a pretty substantial reduction from
13 the previous year, but I think that is probably not a very
14 accurate portrayal of the commitment of the program to
15 continue to support that particular technology.

16 MS. HOLMES-GEN: Thank you, that is helpful. I
17 wanted just to bring up an issue that I brought up before,
18 which is an issue of public education, and my understanding
19 is that the public education funds that are committed here
20 are basically toward getting the word out about these funds
21 in helping to generate applications, which is, of course,
22 very important. And I think, at some point, I would like to
23 have a more serious discussion about how is this AB 118
24 program going to potentially contribute to a broader public
25 outreach effort, to tap into the public's deep interest and

1 concern about our oil dependence and desire to move forward,
2 and take advantage of clean alternative fuel vehicles, but
3 needing to understand more about the options and how they
4 can get going to get into these products. So, I just - as
5 far as I can see, we have not really developed a plan at the
6 state level to really conduct that kind of - or, to work
7 together with others and to provide a vision for that kind
8 of broad outreach campaign regarding reducing petroleum
9 dependence, and getting folks connected into our cleaner
10 technologies. And I think that would be a very productive
11 discussion as we go forward as to how we might view some of
12 these funds to help move that ball forward. We also had -
13 the Lung Association and a number of groups signed on to
14 some comments that you have also for the outline - some
15 suggestions for how we might move forward in the next phase
16 in identifying some more specific goals for each of the
17 categories of funding, in terms of specific results that we
18 would like to achieve in terms of the number of vehicles,
19 the numbers of charging or fueling stations, GHG reductions,
20 just some more specific criteria that we could apply for
21 each category to help connect the allocation of the funding
22 to the specific goals we have, to get technologies on the
23 street and to move forward in support of our 2050 goals.
24 So, I wanted to note those comments and hopefully we can
25 discuss those more as we move forward.

1 VICE CHAIR BOYD: Thank you, Bonnie. Mark.

2 MR. LEARY: Thank you, Commissioner. I just
3 wanted to at least start by referencing back to the process
4 discussion and offer my sympathies, having been a
5 longstanding bureaucrat at the -

6 VICE CHAIR BOYD: Yeah, fellow state agency
7 bidder.

8 MR. LEARY: Yeah, it is often much more difficult
9 to give money away than it is to take money in; in fact, the
10 state is much more experienced and streamlined about taking
11 money in than it is putting it out there, even though it is
12 to the state's best interest to have the money out on the
13 street and gainfully used. As you go through your lessons
14 learned, I once again offer our assistance. I have often
15 hypothesized that there might be a lot to benefit from
16 organizations like ours, comparing notes about processes and
17 procedures, and getting money out the door. And, to the
18 extent that you think we can offer any assistance in that
19 regard, we would be happy to.

20 In terms of the plan itself, I think in past
21 comments I have sensed a warm reaction, a positive
22 supportive reaction, when I have mentioned the need for
23 increased funding, or at least a strong funding for
24 biomethane and the potential that the organic fraction of
25 the municipal solid waste stream offers in this effort. And

1 I am a little bit chagrined and dismayed to see the
2 biomethane support actually diminish from the last version
3 to this one, not dramatically, but we thought, you know, \$10
4 million was barely scraping by then, and now it appears to
5 be down to \$7 million. Maybe a little more interaction on
6 the staff to staff basis, so it can help us understand why
7 that decision was made, why that reduction was made, and I
8 look forward to having a discussion like that maybe outside
9 the bounds of this meeting, so that we can come to
10 understand it.

11 VICE CHAIR BOYD: And I look forward to an arm
12 wrestling contest between you, Tim, Bonnie, and other folks
13 --

14 MR. LEARY: Of course, of course, of course.

15 VICE CHAIR BOYD: -- later in the day.

16 MR. LEARY: Of course. That is part of the
17 difficulty of your job, is spreading a limited amount of
18 funds around in so many different directions. But I know in
19 your heart you believe in the potential there, you have
20 spoken to it often, and I know the stakeholders, a
21 t least in this sector, have long spoken of your support and
22 appreciation for what they are trying to do. I think they
23 need to be more aggressive with their own money to do what
24 they are trying to do, and maybe that is part of your
25 thinking in making this reduction. But, one way or another,

1 we continue to offer our assistance. We want to be part of
2 the administrative process to the extent we can be helpful,
3 and also be part of the scoring process, as we have offered
4 in the past, and have participated in the past, to help
5 lighten your load in making these awards and getting the
6 money out the door.

7 VICE CHAIR BOYD: So, thanks, Mark. And we look
8 forward to, you know, and in our recent discussion, our
9 continued discussions on lessons learned, we have talked
10 about the involvement of multiple stage - you sent us a very
11 thoughtful letter a while back that we pondered a lot, and
12 it is in the agenda book for our lessons learned and having
13 these other agencies discussion, as well. And you are
14 right, I mean, sitting here as Chair of the Governor's
15 Bioenergy Interagency, you know, I zing the staff all the
16 time about biomethane, but there are hurdles we need to
17 mutually clear. Yeah, there are hurdles that we have not
18 been able to clear, as you know only too well, legislative
19 and in statute and what have you, that probably would allow
20 future years to be a little greener, pardon the pun, in that
21 area. But, yeah, let's continue to work, and thanks for
22 your comments.

23 COMMISSIONER EGGERT: And I just want to add to
24 that and also, thank you, thank yourself and the others at
25 Cal Recycle for the contributions. I was going to note that

1 some of the feedback that you have provided us, you know,
2 sort of emphasizes the opportunity that exists within
3 resources such as the organic fraction of MSW, and
4 biomethane is not the only category that can take advantage
5 of that resource, so on the biofuels side, as well, you
6 know, both the existing Program Opportunity Notice, as well
7 as future ones, I think we do have an opportunity to look at
8 how that resource is used and put to either biomethane
9 production or, you know, other types of liquid fuel gasoline
10 substitutes, as well. And we want to continue to have the
11 discussion about sort of the strategic use of that resource
12 with your organization.

13 VICE CHAIR BOYD: Barbara.

14 MS. HALSEY: Thank you. Barbara Halsey,
15 California Workforce Investment Board. Again, I want to
16 thank the Commission for the investment that they have made
17 over the past year in workforce development. I do want to
18 go back to a comment that Tom made about the need for
19 consistent signals, and address that in terms of workforce
20 development efforts.

21 I think we have seen over the course of the past
22 year that, in relationship to the AB 118 money, the efforts
23 that were most successful in workforce development and the
24 most relatable to the goals of AB 118 have been those that
25 have been undertaken through the employment training. I

1 think the panel, in that it works directly with employers
2 who have needs for existing workers to manage new technology
3 and new processes and shifts within the industry is really
4 well poised to assist the Commission in meeting some of the
5 workforce goals that it has. So, I would hope that the
6 Commission would consider continuing an allocation to the
7 Employment Training Panel. I know there was a request for
8 \$4 million, and I know that is not reflected in this plan,
9 but I would really encourage consideration be given to that.

10 The second piece, in reading through the workforce
11 section, I note that there is a desire to continue the
12 partnerships and to evaluate future or potential funding
13 opportunities, and I would like to offer to the Commission,
14 through the Green Collar Jobs Council, under the Workforce
15 Investment Board, a seat at the table as we begin to talk
16 through a master workforce plan for green collar jobs
17 throughout the state, and certainly the conversation you are
18 having here, and certainly the funding you are allocating,
19 to spur growth in industries and growth in technologies as
20 they relate to the goals of AB 118 is a critical part of
21 that conversation.

22 I also want to emphasize that, as we look at how
23 we develop talent, your comments about connecting with those
24 career partnership academies, and with the Regional
25 Occupation Programs, in bringing people who may not be

1 slated to go into, or may not want to go into college, but
2 need an avenue to a good paying job, maybe through
3 certificate programs, is absolutely right on, and I am very
4 excited to see that you recognize in your plan there is an
5 opportunity to work with our high schools, with our ROPs,
6 with our Adult Education System, to move those individuals
7 who have sat outside of economic opportunity, into economic
8 opportunity through the programs that you will hopefully
9 fund in the future.

10 The other thing I want to emphasize is, again, as
11 you make investments in all of these technologies on this
12 side of your plan, there is a workforce component that goes
13 along with it. And, eventually, as California's economy
14 begins to recover, the industries that are growing on this
15 side of the plan will be in competition with other
16 industries that are also going to be growing, so it is
17 critically important that we begin to design a thoughtful,
18 sustainable workforce investment strategy to ensure that we
19 have the talent available as the research and development
20 comes to fruition, as old industries transform to new ways
21 of functioning in order to meet the standards that are being
22 established, that we really thoughtfully plan for how we are
23 going to attract the workforce necessary to support the
24 industries that are emerging through the investments that
25 you are making. So, we will look forward to working with

1 the Commission on that.

2 VICE CHAIR BOYD: Well, thank you, Barbara, and we
3 have talked before. And I appreciate your comments and
4 appreciate the recognition that we are all beginning to have
5 of the need to integrate activities in one area with
6 activities in another area. And I, for one, appreciate the
7 concern about the signals. A dilemma we have gone through
8 in putting this particular plan together is not quite so
9 much signals as maybe balance, and that is we really made a
10 pretty substantial commitment to workforce development
11 training in the first Investment Plan because, you know,
12 this program 118 and its inception, and launching, was
13 occurring in the depths of our recession, and we recognized
14 early on that that value of workforce development and
15 training and the need for this, as we create new industries,
16 one of the concerns that you have heard a lot of discussion
17 about today is the slowness with which the programs are
18 getting launched, the money is going out the door, and
19 frankly, one of the concerns we had was trying to balance
20 between getting those businesses started that would create
21 the jobs, to hire the people that are going to be developed,
22 vs. developing people for jobs that are not there yet. And
23 the more dialogue we can have within the Green Collar Jobs
24 Council and interaction, presumably, in a forum like that
25 with, you know, our own state and other local folks who have

1 their fingers on the pulse of the economic growth in terms
2 of businesses, and what have you, the better off we will be
3 able to balance this. We just thought, "Oh, boy, we've got
4 a pretty good commitment on development people, and we're
5 not getting the money out the door to get these industries
6 started, to create the jobs." So, in our mind, there might
7 be a tiny little bit of a lag here in the investment and
8 workforce development as we have tried to push more and
9 harder on getting some of these programs launched that
10 hopefully - I mean, there are indeed here some who will
11 fail, but we think the majority of these are more in the
12 developed than the demonstration area, and deployment wide,
13 that would generate the jobs. So, we appreciate any help we
14 can get in understanding the balance, and if we have missed
15 it, and if we are wrong in our current assumptions of, okay,
16 this next round, as I said, in a few weeks we will start
17 talking about the next iteration and I think we will
18 consider all of this now as we get through the issue, and I
19 will welcome you to the arm wrestling contest at the end of
20 the day here.

21 MS. HALSEY: I will be there.

22 VICE CHAIR BOYD: Jan.

23 MS. SHARPLESS: Yes, thank you. As I review this
24 Investment Plan, I think the thing that struck me, first and
25 foremost, is that it is a snapshot in time and really what

1 we need to do, I guess, in trying to give you some feedback
2 on the way the money is being allocated, and whether or not
3 it is going to meet the targets that you have established
4 for this program, really gets back to the fact that this is
5 cumulative, and that when we look at the allocations in each
6 one of these categories, it is cumulative in the impact that
7 monies have already been spent; in other words, if you look
8 at the issue of biomethane, there was an issue raised
9 whether \$7.5 or \$6 million was the adequate figure, but if
10 you go back and try to look at what has already been spent
11 in the biomethane area, I had to kind of drill through the
12 narrative, and \$46 million to start, and then a reallocation
13 of \$26 million, and now what is being appropriated in this
14 Investment Plan. Now, my figures may or may not be right,
15 this is what I got out of the narrative, but I think that is
16 just illustrative of the fact that, when we look at what has
17 been spent on EV infrastructure, you know, there is a whole
18 lot that is being spent on EV infrastructure, to Bonnie's
19 point. And we do not have a good idea of, when you look at
20 what is being spent from the federal funding, from the local
21 funding, from 118 funding past and proposed, how big is that
22 amount? And what is the ultimate need? I do not have any
23 really good sense of what the ultimate need is, and I was
24 pretty happy to see that NREL put together some kind of
25 plan, so we do not just have local government plans, and we

1 do not just have, you know, CEC plans, or we just do not
2 have auto company plans of where these EV charging stations
3 need to be. And I think the other problem, which is
4 acknowledged in the CEC's report is that the PUC decision,
5 which is yet to come, is going to be a major driver on
6 residential charging and public access charging, and we do
7 not have that knowledge yet, and so that is acknowledged.
8 So, it is really hard to say that this is the most correct
9 amount in the Investment Plan. I think that the CEC has
10 given it the best stab they can, and I think they have
11 acknowledged that they can move money between different
12 categories if they so find that the need is less or more. I
13 am not sure as an Advisory Committee person I feel
14 comfortable that they are going to be moving a lot of money
15 around in different categories, but they do have that
16 opportunity. So, I think that one of the things that I had
17 to look at was sort of the cumulative impact, that funding
18 from all sources and past sources, and 118, are having on
19 meeting the goals. And quite frankly, that is difficult,
20 and I am wondering if there is not yet another matrix that
21 could be put together. Certainly, I would think that the
22 Legislature - and it comes to a point with Tim and Bonnie
23 and people wanting to know, you know, give us updates, give
24 us updates, well, that is part of the update thing, is how
25 much money is being spent by everybody, what - it is not

1 just \$14 million in the development and demonstration issue
2 area, it is \$14 million plus, plus, plus, plus, plus, plus.
3 And to Will's point on, you know, should it be hydrogen, or
4 should it be E85, I think there is a big driver in E85 and
5 that is the Federal Renewable Fuel Standard that is pushing
6 that, vs. hydrogen which is basically being pushed by ARB
7 staff. So, you know, whether business reacts to say there
8 is more certainty in the fact that we are going to have E85
9 stations out there, so we are willing to take that risk, or
10 we are willing to invest because we know that there is going
11 to be X amount of demand because of this federal mandate,
12 vs. the hydrogen, which is being rolled out pretty much by
13 the ZEV requirement, as I understand it from the ARB. So, I
14 guess my point here, y'all, is to say that I think you have
15 done the best job you can in terms of trying to figure out
16 where you are going to meet - where the CEC's role can have
17 the biggest impact. That is not to say that the CEC, in
18 partnership with everybody else, is not having a big role,
19 too, but there are certain places where nobody can really
20 come to the counter and weigh in, and I think the CEC has
21 tried to do that. Now, as I stated earlier, I think that,
22 in those areas, they are pretty big risk areas, I think you
23 know, being formerly in government, we all like to sort of
24 cover our risk, and we like to have more of a sure thing.
25 And I think some of these things that are more commercial,

1 like the natural gas stuff, you know, that have greater
2 maturity, like propane, are certainly areas that are a
3 bigger, sure thing and, you know, we could pile a lot of
4 money in that, but whether or not that is going to get us to
5 the 2050 goal, I do not think so. So we have to take these
6 bigger risks. So, I guess the long and the short of it is,
7 that I do not know that I could give you any better advice
8 on how you balanced and weighted this than what you have
9 done. I think that your Appendix A, that spells out your
10 analytical process has been pretty well vetted and people
11 have pretty well bought into that, and I also think that
12 your Gap Analysis, you know, because you have had public
13 hearings, and I like that idea of going outside and getting
14 the input from the people that it is going to impact, you
15 have taken that information and you have folded it in.
16 Personally, I might have suggested that you put different
17 dollars in different places, just because of my own
18 preferences, but that is not what this is about. And
19 looking at it from a higher and broader standpoint, I would
20 say that, you know, you have done a pretty good job in
21 getting to where you are. This is not a business plan, this
22 is not developing a business case for each category, this is
23 an Investment Plan. And based on that, I would give it a
24 thumbs up.

25 VICE CHAIR BOYD: Thank you, Jan, that means a lot

1 to us and certainly to me. I appreciate your comments and
2 appreciate the fact that you, as a veteran of these
3 activities, know what staffs at the ARB, CEC, and other
4 agencies go through to come up with something like this.

5 MS. SHARPLESS: You know, I forgot one important
6 thing. The Grid.

7 VICE CHAIR BOYD: The Grid.

8 MS. SHARPLESS: That is the one area where I get
9 really nervous because I do not know that people are really
10 -

11 VICE CHAIR BOYD: This is your responsibilities to
12 WECC coming out right now.

13 MS. SHARPLESS: This is my WECC cap. The Grid
14 has, you know, been around for a long time, it is based on
15 loads, and loads have been pretty well fixed, and so when
16 you look at using the Grid now as a transportation fuel, you
17 have got to bring some stakeholders that I do not see
18 around. I know the utilities, you know, think to get
19 electric vehicles, but the Grid is going to be a drag. You
20 have a capacity issue, and you have a flexibility issue, and
21 people that are dealing with transmission issues now are all
22 focused on trying to integrate renewables into the current
23 grid system. We are doing some scenario studies on EVs and
24 the impact of EVs, so that is the good news, but do not just
25 assume that the Grid is going to be there for the taking. I

1 think somebody has got to start looking at the
2 interconnection between the Grid and using it as a
3 transportation --

4 VICE CHAIR BOYD: Well, I thank you for putting
5 that out in front of this larger audience, and I know we
6 have talked about WECC and you have educated me on what they
7 are doing, and I do know within California we are having
8 these discussions in spite of the rather strange to
9 understand transmission planning and approval process inside
10 the State of California; in spite of a lot of things,
11 California does make progress. That is an excellent point
12 about the Grid. Within the framework of this Electric
13 Vehicle Collaborative that is being formed, this is going to
14 be one of the subject matters that will be discussed because
15 we are going to have utilities at the table, and
16 Commissioner Eggert, I am reminded we better make sure we
17 have all utilities at the table, not just the IOUs, and that
18 is all the PUC can influence is the IOUs, so, in any event,
19 excellent point and I am glad Jan is there worrying about it
20 within the Western Grid for us, as well.

21 COMMISSIONER EGGERT: Yeah, just a couple of
22 additional comments. As we move forward with planning for
23 our role in the context of EV deployment, I think
24 understanding the fact that there is some potential concerns
25 that emerge about using the grid as a transportation energy

1 supply because of capacity limitations of local
2 distribution, concerns about effecting peak loads, you know,
3 all the associated transmission issues, and then, of course,
4 also recognizing that there is tremendous opportunity that
5 exists because of the fact that you have a load that can be
6 scheduled, it is not like when you flip on the lights, they
7 have to come on, and with an electric vehicle, you basically
8 want to make sure that it is full when you get in to drive
9 to work or to the store, and so the ability to manage that
10 load is an enormous opportunity to make better use of the
11 Grid, to make better use of generation capacity to integrate
12 renewables. And I know a lot of the studies that are
13 underway are helping us understand the implications of
14 different charging strategies that then can help us develop
15 our investment and incentive strategies.

16 I did just want to make one quick point that you
17 had brought up about this plan is not a business plan, and I
18 think, you know, the benefits of doing the planning process
19 on an annual basis is - they are significant because it does
20 allow us to get input from you, the Advisory Committee, from
21 other stakeholders, through workshops, and it sort of brings
22 us to a point where we can at least have some appreciation
23 for how this was arrived at. Some of the disadvantages is
24 that, you know, it does kind of start to form into stone
25 once you put these numbers in these tables, and then you

1 move towards solicitations and other things, and the ground
2 is shifting under our feet, things are changing quite
3 rapidly, and so, if you were an investment firm, you would
4 not do it this way. You would have a number of different
5 initiatives and they would be adaptable to those changing
6 market conditions and those changing investment
7 opportunities. So, I think that is the other significant
8 balance that we have to face, is how do we create a plan
9 that is likely to be obsolete, you know, the week after we
10 publish it to some extent, but allows us sufficient guidance
11 to move forward with those investments, you know, over the
12 subsequent year.

13 VICE CHAIR BOYD: Thank you, Commissioner. We are
14 in a world of hurt time-wise here. We have yet to hear from
15 the Advisory Committee members on the phone, so can we start
16 that process now? Well, Advisory Committee Members out
17 there, do you want to start with your comments, whoever gets
18 there first?

19 MR. COLEMAN: Brooke Coleman, thank you so much.
20 I hope I did not jump in front of anybody else.

21 VICE CHAIR BOYD: You got here, it is yours,
22 Brooke.

23 MR. COLEMAN: Okay, thanks. A couple comments, a
24 couple questions. I have been listening and agreeing with a
25 lot of what is going on, and also particularly with regard

1 to this is not an easy process, but we have heard that
2 already from everyone, and I would certainly agree with
3 that, and we have a lot of sympathy for CEC. But there is a
4 "but." As an organization that represents companies that
5 rely on getting their fuel through the blend wall, to the
6 400,000 FFV's that are out there, I am trying to get - and
7 also companies, by the way, that are diesel substitute
8 companies and biogas companies - I am trying to get my arms
9 around the decision to create this new program, the
10 Innovative Technologies and Advanced Fuels, and why the
11 allocations, or why the money was drawn out of only bio-
12 related baskets, and this last minute stuff is a concern,
13 certainly. This is all public money, this is not just
14 because it is in the biofuels basket does not make it
15 biofuels money, but I am trying to understand the rationale
16 for doing that, so I have a couple of questions I would
17 appreciate answering, and then I have a follow-up couple of
18 issues. The questions are, what was the rationale for doing
19 that? And what was the stakeholder group that decided that
20 we needed to create a new program sort of towards the end of
21 the process?

22 COMMISSIONER EGGERT: I will take the first stab
23 at that. So I think maybe the second part, which is the new
24 category, because that did not get yet a good discussion,
25 you know, I think over the last year we have seen a number

1 of opportunities that have come down the pike with respect
2 to partnering with the U.S. agencies, particularly DOE, who
3 has sort of provided a number of different opportunities to
4 go after significant amounts of funds for activities that
5 are relevant to the AB 118 program. And we have been
6 challenged in responding to those opportunities because we
7 did not really have a process or a specific source of
8 funding to provide match for those innovative proposals that
9 were being provided to the Feds, but we went through this
10 exercise with ARRA, which I will not spend much time on, but
11 I can say that we sort of collectively internally recognized
12 that we needed both a better process and a designated source
13 to go to, and I should - we will be sort of further fleshing
14 out this particular category, but this is really for what I
15 would characterize as highly leveraged opportunities for
16 Federal cost-share, so they are not just perhaps, you know,
17 your run of the mill Opportunity Notice FOA from DOE, but
18 areas where there is the potential for a significant amount
19 of money to flow to the state, and by providing the
20 opportunity to go after some state match, it would
21 significantly increase the probability of receiving those
22 funds. So that was kind of the rationale and, you know, we
23 can provide some examples, there is one listed here, but
24 that is I think to your second question. I mean, I guess to
25 your first, I think, as with all these decisions, it is

1 trying to figure out, again, what is the proper balance, and
2 we have had that discussion many many times, but you know,
3 the money had to come from some categories, and looking at
4 the balance of investments, a decision was made to draw it
5 from those two you mentioned.

6 MR. COLEMAN: So, I mean, what is strange about it
7 from our perspective is that all of it came from bio-
8 resources, so you have numbers that are far higher in the
9 hydrogen section, natural gas went up, and all of the money
10 was drawn from bio-resources, not 75 percent, not 80
11 percent, but all of it. Can you explain that? Or is it
12 just an Executive decision? Certainly, I understand those,
13 as well. But is there any rationale for why all of it, I
14 mean, is there some reason that you felt that bio was too
15 high?

16 COMMISSIONER EGGERT: I guess I would invite, if
17 you have an alternative suggestion, maybe we could talk
18 about that.

19 MR. COLEMAN: Okay.

20 VICE CHAIR BOYD: I will just add one brief
21 comment, if I can be brief. As we and the staff talked
22 about this, and the creation of this category, Commissioner
23 Eggert and I, particularly, were cognizant of the poor track
24 record California has in pursuing some of the funds that are
25 distributed by agencies other than the Department of Energy

1 for these kinds of activities, and quite frankly, that is
2 predominantly bio activities, much of which are funded by
3 USDA, and none of that money seemed to be finding its way to
4 California, and we pledged to each other that we are going
5 to go after some of that money. And I think it
6 coincidentally will benefit bio-type fuels more than perhaps
7 the other areas, and that may have had - we did not pick on
8 bio, but that may have influenced us a little bit in the way
9 we sat down and moved the change around on the table.

10 MR. COLEMAN: Okay. Well, we - did I just hear
11 myself, or did I hear somebody else?

12 MR. CARMICHAEL: This is Tim Carmichael. Brooke,
13 I do not know where you are going next with your questions,
14 but I have a follow-up on this piece of your questioning, so
15 -

16 VICE CHAIR BOYD: Brooke, will you entertain a
17 question from Mr. Carmichael?

18 MR. COLEMAN: Arghhhhh! Okay.

19 MR. CARMICHAEL: Thank you, I owe you one. So, on
20 page -

21 MR. COLEMAN: But I do have more to say, so do not
22 try to filibuster me.

23 MR. CARMICHAEL: I am not going to at all. On
24 page 94, on this Innovative Technologies and Advanced Fuels
25 funding, you know, one quick detail, there is a typo, it

1 should be \$8 million, not \$3 million. But on this piece,
2 you know, Commissioner Eggert, you were just trying to speak
3 to this Federal cost sharing of \$5 million, and I have to
4 say, I have run into it three times, I have listened to your
5 explanation, and frankly I do not understand, are we talking
6 about \$5 million that CEC would distribute to California
7 companies or agencies to help with the application process,
8 the proposal process, to go after Federal funding? Or, are
9 we saying that the \$5 million is the pot of money that
10 agencies or companies can say, "Look, we are going to get \$1
11 million from the state to match our private contribution, to
12 get \$10 million from the Feds?"

13 COMMISSIONER EGGERT: The latter, and so we do, as
14 I mentioned, we do have to develop a process for this, which
15 I sort of - I think we kind of currently envision to be a
16 open solicitation, that would set out the conditions and the
17 criteria by which somebody could make that request, and it
18 would be - it is not articulated to be specific to any
19 particular category, so this would be available for biofuels
20 categories, as well as the others, but it would be
21 specifically for purposes of federal match, and it would be
22 sort of the way you characterized the latter process.

23 MR. CARMICHAEL: Brooke, I seed back the remainder
24 of my time.

25 MR. COLEMAN: Thanks, that was on my list, so you

1 actually saved some time. And we would like to, speaking
2 directly to that particular issue, I think the one thing
3 here that I personally most understand is the ambition to
4 leverage Federal dollars, and having been around the bio
5 world for a long time, there are significant USDA dollars,
6 and I understand California's interest in doing that, and if
7 that is going to happen, we look forward to doing that
8 because I think you are right, Commissioner Boyd, that a lot
9 of that money stops somewhat short of the eastern border of
10 California. However, my second point with regard to
11 Innovative Technology and Advanced Fuels, this concerns me
12 not so much - it concerns me from two levels, one is, as
13 someone who wants to have some sort of accountability for
14 public money, and also as a representative of an industry
15 that theoretically has money headed away from it, and
16 towards this, the top six or seven things that I see on page
17 93 concern me as a role for public money, some of the things
18 I can prove the efficiency of petroleum, and I am showing
19 fuel engines improve the design of key vehicle components
20 and improves the design of key alternative fueling
21 structure, improve vehicle operations, this strikes me as
22 something that the auto industry should be doing. And so,
23 could someone comment on what exactly we are going to do
24 with this new \$3 million pot to make sure that we are not
25 throwing a drop of water on a burning fire, and wasting the

1 public's money? And if you need a reference, it is page 93
2 on the plan.

3 COMMISSIONER EGGERT: I will take the first again,
4 and I think we did have some discussion about this at the
5 last meeting, I do not know if you were involved in that. I
6 think you are right, I think the amount of investment that
7 we can put towards, for example, light-duty vehicle
8 investment, would be a drop in the ocean, you know, there
9 are indeed budgets collectively that well exceed a billion
10 dollars annually. We do have a number of other programs
11 looking at, for example, medium- and heavy-duty vehicle
12 development. We are going to be releasing a solicitation
13 for a Medium- and Heavy-Duty Center of Excellence to be able
14 to develop sort of - identify where are the most significant
15 opportunities, and there are a number of different
16 components that serve those different applications, as well,
17 and we do have, for example, some funds that are going
18 towards manufacturing incentives that are helping to support
19 companies to come to the state, set up manufacturing
20 capacity to develop those components and vehicles. I think
21 probably, you know, as sort of a generic answer to your
22 question, I think this list of bullets is a bit of a
23 catchall, and for each of these, I think there is a set of
24 questions that would need to be asked relevant to your
25 question, which is, you know, what is the potential benefit?

1 How are we filling a gap that is not filled by private
2 investment? And what is the sort of appropriate scale,
3 scope, and target for that investment? So, I do not know if
4 that answers your question, but -

5 MR. COLEMAN: Well, it does if that happens. I
6 mean, I think there is a concern and I do not want to beat a
7 dead horse, but there is a concern, Advisory Committee-wide,
8 that there could be better, that we have taken a step, there
9 is no question about it, but that there could be better ways
10 that we sort of cross reference what we think are the most
11 effective strategies for reducing the eight or nine things
12 that 118 wants to do. So I will stop on this particular
13 point by hopefully putting a yellow flag on page 93,
14 hopefully we will see those controls and we do not just
15 throw \$3 million at a space that is occupied by 10 or 20
16 billion in terms of the use of public money. Third quick
17 point, it says in the presentation that you wanted to
18 earmark money for this STEPS program, I just want to
19 register, absent greater detail, our opposition to doing
20 that, or at least an explanation as to why we would do that.
21 For a variety of reasons. One is that this is a program
22 that has sponsors like BMW, GM-Volkswagen, BP, Chevron,
23 Shell, Total, companies with, needless to say, deep pockets.
24 So I am not exactly sure why we would take public money and
25 put it in a program that, from my perspective, based on the

1 budget that we work on is already flush with corporate
2 money, and if we did so, perhaps it should be for a specific
3 project that they happened to be an expert on, so I do not
4 think they should be excluded, but this general reference
5 to, you know, we want to give money to STEPS really throws
6 up red flags from the public money perspective, and I would
7 invite comment on that before I quickly close with a 30-
8 second closing.

9 COMMISSIONER EGGERT: So, just a quick comment. I
10 do note that one of the commenters here is the Director of
11 that program, who might have something to add. But, we have
12 a tremendous asset here in the state, which is a number of
13 different university programs that are developing models
14 that can help us do planning assessment evaluation analysis
15 to support our decisions on strategic investments in the
16 area of advanced fuels and vehicles. The two programs that
17 I think are called out, one of them is the UC Irvine
18 program, which includes some models such as the STREET
19 Model, that has capabilities to look at different
20 infrastructure deployment, strategies, and kind of
21 understand the pros and cons of those strategies. Within
22 the STEPS programs, there are a number of similar models
23 that can provide cost assessments, can basically help answer
24 a lot of the questions that we have been talking about, and
25 sometimes struggling with here today, and so I think the

1 intent there is to help support the use of those models
2 applied to the questions of this program, to help inform
3 both the magnitude and the strategic direction of the
4 investments that we intend to make in these different fuel
5 and vehicle categories.

6 MR. COLEMAN: I am waiting for the other shoe to
7 drop.

8 COMMISSIONER EGGERT: The other shoe being?

9 MR. COLEMAN: The Director of STEPS that might
10 want to tell me something.

11 COMMISSIONER EGGERT: Oh, well, I would prefer to
12 wait until - we have a whole list of folks, and Professor
13 Ogden is one that I can maybe put towards the front of the
14 line if nobody objects, strenuously. But we should probably
15 get through the Advisory Committee -

16 MR. COLEMAN: Okay, so let me do a quick closing
17 and then I will get out of your hair. So, given the
18 comments we have made and the questions we have asked, and
19 answers, I just want to reiterate that I think part of our
20 concern with being on the "wrong end" of a movement of money
21 from one place to another at the last minute is that we do
22 not understand the why. I cannot bring a "why" back to the
23 cellulose companies, the infrastructure companies, that are
24 relying on this program, and in some cases have moved to
25 California, in one specific example, and I hope they will

1 speak today if they are in the room, in part because of this
2 program, and explain to them why, you know, \$2 million has
3 moved out of just bio programs, based on metrics that I do
4 not understand. And so I think a lot of people in the room
5 feel that way, whether they are on the receiving end, or the
6 giving end, but the key here is in moving forward is,
7 whoever does the work, STEPS, or otherwise, I really think
8 we need to figure out at least guideline-wise, how we are
9 going to make these decisions, because these last minute
10 movements of money for new programs have created a lot of
11 anxiety for us, given that the money came out of us, "us."
12 But I think it is going to be an issue, moving forward.
13 Again, one allocation biofuels may do less well than
14 Hydrogen and vice versa, but I think knowing why is
15 important.

16 COMMISSIONER EGGERT: Just one clarification, the
17 STEPS program is not a reallocation, there was no specific
18 money moved in that particular category.

19 MR. COLEMAN: I understand. Thank you.

20 VICE CHAIR BOYD: Okay, other Advisory Committee
21 members, please.

22 MR. COLEMAN: Yeah, this is Will Coleman from Mohr
23 Davidow. And I really just wanted to echo a couple of
24 comments that have been made, and I will just make one quick
25 suggestions. I think, in particular, I wanted to say that I

1 certainly appreciate the complexity of what CEC staff has
2 had to pull off here. I think, you know, as an investor in
3 these technologies, we only really have to consider the
4 economic viability of these things, and it strains the
5 imagination to understand how hard it is to deal with both
6 that and all the public benefit measures that you guys have
7 to consider, so I certainly want to appreciate that. And
8 also, you know, I think that some flexibility in the
9 categories is necessary, and I think we have talked about
10 this, over the course of the last couple years, which is
11 that, you know, these categories are set early on and then,
12 I think the point was made earlier, there is some stress
13 when these things - Brooke's point - when these allocations
14 change. So, I do not necessarily oppose the changing of
15 these allocations, I think the challenge is, what I keep
16 hearing from folks is the transparency as to why. And I
17 feel the same way, is I think the challenge is that - I
18 think there are obvious metrics, I think that this not ever
19 going to be an automated process where we go and run a
20 formula and decide how to allocate all these dollars. There
21 are going to be soft decision metrics that are used. But,
22 on the other hand, there are performance metrics that can be
23 applied here, that give us a sense of the effectiveness of
24 these dollars, and so that really gets to my suggestion
25 which is, I think it would be extremely helpful both in the

1 final plan and in future allocations, future plans, to see
2 not only where the dollars are going, but the expected
3 impact of those dollars, to the degree that we have
4 expectations around reductions in carbon emissions, or job
5 creation, or revenue generation, or private capital that
6 will be matching those dollars, I think there should be a
7 very simple set of metrics, three or four of them, that say,
8 "Here are basic guidelines. This is why we are putting so
9 many dollars into one category vs. another." And, you know,
10 we should understand that these things will change over time
11 and that there has to be some sort of understanding that
12 dollars now come off future reductions or benefits later.
13 But I think as a basis for the discussion, it would help
14 certainly the discussion be more oriented around why the
15 priorities are what they are because I think that we all
16 struggle a bit with what is going on behind the curtain, and
17 I think that what is going on behind the curtain is that
18 there are some very good reasons for doing what you are
19 doing. And I think we just need to have a better sense of
20 what those are so that we can actually debate them in the
21 open. So, to the degree that that is possible for the final
22 plan, I think it would be extremely helpful to have it there
23 with that chart that details the allocations. And the other
24 thing I think would be useful is - I think Janine's comment
25 earlier about total allocations over time, over the life of

1 the program, and I think we tend to look at these things in
2 isolation with each funding round, and I think that is very
3 difficult. So, if it is possible to do that, I would very
4 much appreciate it. And if we can focus on some of those
5 challenges going forward in terms of those different
6 metrics, that would be great, as well.

7 MR. CARMICHAEL: Tim Carmichael, I just wanted to
8 chime in and note that what Will is suggesting would also be
9 very helpful relative to defending the program,
10 communicating the positive aspects of the program, you know,
11 the Legislature and others.

12 COMMISSIONER EGGERT: Actually, just - we had not
13 had a chance to talk about it so much yet, but this issue of
14 sort of evaluating these projects and their relative
15 benefits, I think that is something that we would invite
16 comment, input as to what types of metrics would be the most
17 suitable, and specifically I am talking about actual project
18 evaluation in this case.

19 VICE CHAIR BOYD: This is in the category of what
20 we around here call MV&E, Monitoring, Verification and
21 Evaluation that I mentioned at the beginning of the meeting,
22 that we need to invest more into that activity to generate
23 these kinds of metrics that answer the questions that have
24 been raised. We recognize the need and, Will, your comments
25 are well taken.

1 MR. COLEMAN: Well, and just one comment on that,
2 so I am talking a little bit about back casting and looking
3 backward at how we are doing in terms of performance, but I
4 am also presuming that there is quite a bit of metrics being
5 used to think about where to allocate these dollars going
6 forward, so even just those decision metrics, or figures of
7 merit would be useful to see, even if they are the 30,000-
8 foot level. I imagine those are playing a large part in how
9 we do the allocations at this level.

10 VICE CHAIR BOYD: Okay, thanks, Will.

11 MR. COLEMAN: Thanks.

12 VICE CHAIR BOYD: Another Advisory Committee
13 member comment?

14 MS. BAKER-BRANSTETTER: This is Shannon with
15 Consumers Union. I just want to thank the staff again for
16 all their hard work, and also comment a little bit about the
17 metrics talk that is going on in the last couple of
18 comments. I think that looking at the greenhouse gas
19 reduction, you know, the most bang for your buck, is really
20 critical, but I think one thing that analysts tend to get
21 sucked into with respect to climate change is the 2050
22 horizon, when I think it is important to remember that, when
23 you predict most things, like whether the stock market, the
24 greatest predictor of tomorrow is what is happening today,
25 so I mean, to me, beyond the 2020 timeframe, I think we are

1 really getting into pretty heavy speculation, and so when I
2 look at the distribution of funds, I think there is a lot of
3 pressure from different industries to kind of get what they
4 see as a fair piece, or somewhat kind of a equal
5 distribution among the different sectors, and I think that
6 looking at what we really expect to get from each sector
7 over the next 10 years in terms of reductions, I think that
8 is a reasonable way to kind of start with a baseline
9 allocation. And so, you know, it is not the only metric,
10 and there is still a lot of assumptions built in, but I just
11 think that is a more reasonable way to look at those
12 allocations in the next 10 years, rather than either an
13 equitable distribution, or really looking at the 2050
14 horizon. So, I think that overall, I do not have a problem
15 with the distribution, but just, you know, going forward, I
16 think that it is important to keep the 10-year timeframe is
17 the most important.

18 VICE CHAIR BOYD: Okay, thank you. Any other
19 comments, other Advisory Committee members out there?

20 MR. SHEARS: Yeah, this is John Shears. I am not
21 sure if I am unmuted. Can people hear me?

22 VICE CHAIR BOYD: We hear you, John.

23 MR. SHEARS: Great. I apologize, I am actually
24 kind of under the weather today and so could not make it
25 there physically, and joined a little late, but caught about

1 the last hour of this morning's session. First, I want to
2 congratulate and thank Commissioners and the staff for the
3 huge amount of work they have put in, put in to yet another
4 Investment Plan, with dealing with the program, such a huge
5 scope of it, encompassing a broad scope of issues with so
6 many different stakeholders and also respecting the growing
7 concerns of the Legislature, our current Fiscal situation.
8 I will not belabor a lot of the points. I think the other
9 Advisory Committee members have covered a lot of the issues,
10 but I just wanted to, going forward, highlight that maybe,
11 while we are contemplating our thinking and next steps for
12 developing the 2011-2012 Investment Plan, that we consider,
13 or staff consider holding workshops to look at the linkage
14 between vehicle technologies that we will be counting on to
15 use a lot of these advanced biofuels, and the tradeoff and
16 challenges that are proposed between air quality, the
17 development of the vehicle regulations for air quality
18 standards, and our needs on the greenhouse gas targets. I
19 just want to remind everyone that the scenarios that are
20 included in the Appendix, especially in the latter years,
21 includes large amounts of biofuels vehicles that are also
22 plug-in hybrid, so we are counting on low carbon electricity
23 in conjunction with low carbon biofuel use. Tom probably
24 can comment further, I am not sure if he commented on it
25 yet, but ARB is currently revising the LEV, the Low Emission

1 Vehicle Regulations, and what are nominally known as the
2 Pavley 2 Regulations, and one of the challenges going
3 forward for Flex Fuel Vehicles, which there are currently
4 maybe a half a million passenger Flex Fuel Vehicles in the
5 State, going forward, vehicles will have to meet a SULEV
6 Standard, and there is potentially a real challenge for the
7 vehicle manufacturers in building SULEV FFVs, going forward,
8 that would be able to accept blends with greater than EV10,
9 and also work well with E85 blends. There are also
10 challenges essentially going forward if large amounts of
11 biodiesel beyond global thresholds of E5 become a reality in
12 the fleet, and I know with new clean diesel vehicles, the
13 vehicle manufacturers are concerned about the many
14 complications that come with the use of a clarified diesel.
15 So, I would just like to offer up that that might be
16 something to consider for workshops as we move forward for
17 the 2011-2012 Investment Plan. And to hearken back on
18 Will's and another Advisory Committee member's comment,
19 possibly it might be also worthwhile to hold workshops to
20 help people out with comfort levels and transparency issues,
21 to discuss the development of metrics for evaluation of the
22 program, it is still really young, and at this junction has
23 not had a chance to see very much, if any, data from funded
24 projects, and I think that will also prove to be an evolving
25 and moving target going forward. So all finished there.

1 VICE CHAIR BOYD: Okay, John. Thank you for your
2 comments, your suggestions, we will definitely take those
3 into consideration, and for making the effort to listen in
4 even though you are under the weather. I hope you get
5 better soon. All right, other Advisory Committee members?
6 Peter Cooper, are you out there, still? Going once? Going
7 twice? All right, I am going to assume we have heard from
8 all of our Advisory Committee members who choose to make
9 comments, or who are able to make comments today. We have a
10 fair number of blue cards here which - is someone trying to
11 speak to us? Somebody is breaking up. Hello? Okay,
12 something broke in. In any event, we have a number of blue
13 cards, it is 12:30ish. I do not know if you people would
14 like a brief lunch break. If the Advisory Committee members
15 can stay with us, or whether we should just press on, and -
16 there is one press on vote out there already - and hear from
17 the public comments here, and then take a brief break and
18 reconvene the public hearing if there frankly is any public
19 to participate in a public hearing.

20 MR. CARMICHAEL: How many commenters do we have?
21 And is there a time limitation on their comments?

22 COMMISSIONER EGGERT: Seven.

23 VICE CHAIR BOYD: Seven. Eight.

24 MR. CARMICHAEL: So we are looking at 45 minutes,
25 roughly, or something in that ballpark, probably?

1 VICE CHAIR BOYD: Yeah, probably, even though we
2 asked people to be quick.

3 MR. CARMICHAEL: I think I would like to press on.

4 MS. HOLMES-GEN: Press on.

5 VICE CHAIR BOYD: Press on.

6 COMMISSIONER EGGERT: We are being advised to
7 press on. Actually, I was going to ask - that obviates my
8 question, I was just going to see if the Advisory Committee
9 members had planned to stay through the afternoon, or if any
10 of them had specific other time commitments, or are willing
11 to -

12 MS. SHARPLESS: Well, you have indicated 2:00, so
13 that was kind of my timeframe.

14 COMMISSIONER EGGERT: Okay.

15 MR. CARMICHAEL: Staff assured me that if we
16 stayed the afternoon, it would be Margaritas and -

17 COMMISSIONER EGGERT: So I think we press on.
18 Should I go ahead and - I will try to enforce some - I mean,
19 so we are now moving on to public comment for the record
20 and, again, this is an important opportunity to hear from
21 the broader public, many of whom also have been involved in
22 the planning process throughout the entire process, and
23 probably have a lot of useful input for us to hear from. So
24 we appreciate everybody who is sticking around, especially
25 our Advisory Committee members, to hear from the commenters,

1 and given - I have got some information about folks who have
2 limited duration for planes, and other things, so I am going
3 to call first Andreas Klugescheid from - I probably
4 butchered that - but the Vice President of Government
5 Affairs for BMW. And either one is fine, and again, we are
6 looking forward to hearing your comments.

7 MR. KLUGESCHEID: All right, first of all, thank
8 you Commissioners and ladies and gentlemen, for giving me
9 the time to briefly speak to you. I have and I understand
10 that there is a five-minute time limit on it, but I have a
11 little PowerPoint because there have been questions all
12 during the conversation today, what the actual
13 infrastructure issue is with EV cars, and you probably are
14 aware, you are probably not aware, that BMW has a fleet of
15 around 600 electric minis running around worldwide, 500 of
16 them in the United States, and I just want to give you a
17 glimpse of what we found out there. We are actually
18 cooperating in the United States with UC Davis, Tom Cackette
19 already knows some of this stuff, but most of you will
20 probably not know, so I am making it short and crisp and
21 brief, but I promise you to give you more information if
22 necessary if you are curious. The Mini E itself is probably
23 known to most of you. Again, around 600 cars around
24 worldwide. We have four major projects, one in Germany, one
25 in the UK, and one in the United States with the Western and

1 the Eastern leg, and we are about to implement another one
2 in China. Most of the - actually in all but in the United
3 States, in all of the other projects, we are working
4 together closely with a utility company in Germany, it is
5 Vattenfall, and in the UK is it Scottish and Southern, in
6 China it is State Grid, which apparently seems to be the
7 biggest utility in the world, and, well, again in China
8 there are only two, anyway.

9 So, just to give you a brief idea of what the
10 whole thing is all about, we are considering in our research
11 user profile expectations, user behavior, charging, and
12 ecological relevance, and today I will only give you a
13 couple of bits on the charging infrastructure topic. So,
14 the data that I have here are preliminary data after an
15 interim, let's say, check after around four to five months,
16 and will focus on Berlin because there we are actually
17 implementing the public infrastructure for that very
18 project, right? We have in Berlin 50 cars and we had up to
19 50 charging points in town, and all of the users were
20 actually getting [inaudible] for home charging, as well. So
21 they have the alternative, and that is the decisive
22 question, right? Home charging or public charging?

23 We found out that, out of the original 30, and
24 then later on 50, charging points, only three were used
25 regularly at all, and that means after three months, the top

1 number one charging point was used 40 times, so that is
2 around every second day, and we are talking 50 users, right?
3 Number two was only used around 25 times in these three
4 months, so that is getting really down, and so that is an
5 interesting observation, I would say. We also asked the
6 users what their preferred charging points would be if they
7 would go for public charging, we have numbers there, you can
8 see them here, you know, parking lots of companies, that
9 means workplace charging is obviously top priority, park and
10 go interest, transfer places, that is airports, railroad
11 stations, and so on, are also priorities. Going down the
12 list, I will just give the priority is getting smaller, but,
13 again, we are talking about in each, as it turns out, in
14 Berlin.

15 On the charging at home, we found out that only
16 one-quarter of the cars are actually charged during the
17 night time, which is a very interesting and very relevant
18 observation when you are talking about renewable energies
19 being used, right? Winds to Grid, for example, ideally you
20 want to have all the cars on the Grid whenever the wind
21 blows, you know, you have the chance to actually get the
22 energy in, but, again, we will probably need incentives to
23 keep people on the Grid, that is another of these findings,
24 and again, it needs more explanation, but just giving you an
25 idea of what is in that research that we did.

1 Mini E drivers were eventually only charging every
2 third day, given that the range of the car is pretty good,
3 around 100 miles in real driving, it is easily achievable,
4 but again, that means the cars are not necessary on the
5 Grid, right? And again, that means they are not charging
6 every day, everywhere, every time, right? We found out that
7 56 percent of the Berlin users were never ever actually
8 using public charging spots at all, so around - up to 60
9 percent were actually never plugging in at a public charging
10 station, and for most of them, that was 94 percent, they
11 were saying that the home charging device, the Wallbucks
12 [phonetic] that I have at home, is totally sufficient.

13 A little - because it is very important for
14 Germans, actually, you know, the question of renewable
15 energy, Major Driver in Germany, everybody was saying, "I
16 only want electric cars I can charge with renewable
17 energies." In the U.S., it is a totally different picture,
18 people are saying, you know, energy security is important
19 for me, local emissions, smog, emissions is important for
20 me, I do not care about the actual CO₂ footprint of the
21 electric cars when it comes to the utility that is behind
22 it, right? So that is an interesting observation and,
23 again, when you are talking about reducing CO₂ emissions
24 overall, that is our target, that is your target, that is a
25 very very interesting relevant finding.

1 We have got a couple of preliminary conclusions, I
2 only want to stick to the one that is relevant for the
3 infrastructure, and that is ensure public charging is
4 sufficient, but supports charging infrastructure at home and
5 at the workplace as strongly as possible; in other words, we
6 are not saying that public infrastructure is not at all
7 relevant, but it is probably also not the top priority.
8 Okay, that is a quick and, yeah, timely walk through these
9 results, and I am inviting everybody who is interested in
10 more and to actually check in with me, and then we can
11 certainly discuss. There are more results, yes, coming from
12 UC Davis and also obviously from the United Kingdom.

13 Two other small comments before I leave here. You
14 were referring in one of your presentations, I think it was
15 Pat Perez, to the hydrogen electric drive, you know, there
16 was a change. Given that BMW was bringing around 100
17 hydrogen internal combustion engine cars, which is not
18 electric drive, I am just wondering if that is of any
19 relevance because we were probably the first company to
20 bring to production the hydrogen car on the market, so to
21 say, and still the internal combustion engine seems to be,
22 at least for us, an alternative to the fuel cell, again, the
23 fuel matters, probably not the technology.

24 And I also want to support Tom Cackette's remark
25 on the AB 118 money for vehicles. We are intending to bring

1 the successor of the Mini E next year, that is the 1 series
2 electric, into the market probably in later month of the
3 year, and we are also seeing the possible scenario that then
4 the funding will probably not be sufficient for that car at
5 all, which is a bit of a disincentive, then, for us,
6 apparently. Okay.

7 COMMISSIONER EGGERT: Thank you very much.

8 MR. KLUGESCHEID: A pleasure.

9 COMMISSIONER EGGERT: And really do appreciate
10 sharing the findings of this empirical analysis, and you had
11 mentioned the UC Davis team was involved, I know I have
12 talked to Tom Cackette a little bit about this, and I think
13 we definitely want to follow-up to dig a little bit deeper
14 into that data and understand how it can help inform our
15 strategy on EV infrastructure. Let's see, I will go next
16 here - and actually, we will be able to share that
17 presentation? Andreas? Is it okay to share this
18 presentation with the rest of the group?

19 MR. KLUGESCHEID: I will probably have to modify
20 it because there are some slides that are probably not
21 necessary.

22 COMMISSIONER EGGERT: Okay.

23 MR. KLUGESCHEID: But you can [inaudible].

24 COMMISSIONER EGGERT: Excellent. Thank you very
25 much. Okay, I do have up Professor Joan Ogden, I see you

1 back there, to provide some remarks on the STEPS Program.

2 PROFESSOR OGDEN: Thanks very much. I will also
3 try to be brief here. I want to thank you for the
4 opportunity to speak to this gathering. And mainly what I
5 want to talk about is the possible relevance of the STEPS
6 Program. First, I will say, I am Joan Ogden. I am a
7 Professor of Environmental Science and Policy at UC Davis
8 and I direct the Sustainable Transportation and Energy
9 Pathways, or STEPS Program at the campus' Institute of
10 Transportation Studies. So I would like to provide some
11 input on analysis and research being performed under the
12 STEPS Program, which is mentioned in the Draft Plan on page
13 104, and talk about the relevance to the Alternative and
14 Renewable Fuel and Vehicle Technology Program.

15 STEPS is a multi-year interdisciplinary research
16 effort, it was launched at these two transportation studies
17 at UC Davis in 2007. It is funded by a diverse consortium
18 of 22 sponsors, who include 60 industry and six public
19 sector agencies. I might mention that the US Department of
20 Energy and US Department of Transportation, USEPA, CalTrans,
21 Cal EPA, and South Coast Air Quality Management District are
22 sponsors, in addition to some of the industry members from
23 both the auto and energy industries that were mentioned
24 earlier, so we have quite a diverse group and this really
25 helps ground our work with a variety of stakeholder, real

1 world points of view. The program currently supports a
2 broad research program involving 15 faculty and 25 graduate
3 students, and the overall objectives are to develop theory
4 tools, simulation tools and methods that will allow self-
5 consistent and transparent comparisons of different
6 promising alternative energy and vehicle pathways.
7 Specifically, biofuels, electricity, hydrogen, and evolving
8 fossil fuels, and this would also include fossil fuels like
9 natural gas, for example, that are not widely used today,
10 and would look at future fossil groups that might include
11 things like carbon capture and sequestration. So, quite a
12 broad slate of possibilities. We seek to do rigorous,
13 transparent - everything is in the public domain that we
14 produce, I might say - and to help inform policy, process,
15 and public understanding of these different options.

16 We also are analyzing potential transitions in the
17 transportation arena, including each of those fuels,
18 individually, but most recently what we have been finding in
19 common with the plan that was put out is that you really
20 need a portfolio approach, so we look at approaches that can
21 combine improved energy efficiency and IC technologies,
22 along with lower carbon fuels and advanced drive trains,
23 including plug-in hybrid battery and fuel cell cars.

24 I am going to submit to the Docket some details
25 about the STEPS program for anyone who is interested, and

1 also you can visit our website or call me.

2 Now I just want to talk about why this research
3 that we are conducting under STEPS could be of high
4 relevance to the CEC's Alternative and Renewable Fuel and
5 Vehicle Technology Program. One of the things we have
6 focused on is developing tools to model vehicle and
7 infrastructure roll-out strategies, and we have done a lot
8 of work in this area in hydrogen, in electric vehicles, and
9 biofuels, all of those areas are things we are looking at.
10 Just an example, in the hydrogen arena, we have developed
11 models that have been used by the U.S. Department of Energy,
12 by the National Academies, and also by industry, to look at
13 strategies for co-locating vehicles and fuels, and how this
14 roll-out might proceed over time. It allows us, for
15 example, to look at different hydrogen station and vehicle
16 placement scenarios for specific regions. We use a lot of
17 geographically specific GIS-type databases that incorporate
18 a lot of information about where people live, where they
19 drive, where existing infrastructure is, and this gives us a
20 very good basis for looking at how we might plan, going
21 forward, and a nice way of visualizing it. So, we have
22 quite an interesting suite of planning tools, and also a
23 very extensive set of engineering economic databases about
24 the different technologies that go into this.

25 So, we just want to say that we look forward to

1 working with you and continuing to work in these areas,
2 looking at transitions and infrastructure strategies, and I
3 will be happy to answer any questions that any members of
4 the committee might have about this program. So that is
5 pretty much all I have to say.

6 COMMISSIONER EGGERT: Thank you very much, Joan.
7 So, I think, actually, if folks have questions, I would
8 suggest maybe to contact you offline.

9 PROFESSOR OGDEN: Okay, that sounds great.

10 COMMISSIONER EGGERT: And so we can move forward,
11 but appreciate that.

12 VICE CHAIR BOYD: I would just thank, Joan and,
13 well, I give up, for those concerned about where we spend
14 our money, Joan and the folks at STEPS have allowed us to be
15 at the table without paying any fees to date, so we
16 appreciate the fact that we have been able to keep up with
17 this program.

18 COMMISSIONER EGGERT: Yeah, and again, I will just
19 reiterate, I think we do have a tremendous asset here within
20 the state among a number of different university programs,
21 STEPS being one of those that can really provide, I think, a
22 significant amount of input into the process and the
23 strategy as we develop our future Investment Plans and
24 strategies for investment.

25 Todd Campbell, the Director of Public Policy with

1 Clean Energy.

2 MR. CAMPBELL: Good afternoon. Again, Todd
3 Campbell with Clean Energy, and thank you for allowing me
4 the time to comment on this effort. I want to thank the
5 Energy Commission, the staff, and the Commissioners that
6 have been very involved in this process, as well as the
7 Committee. We were very pleased to see a reallocation of
8 the funding in the way that it is being presented in this
9 report because we truly believe in the theory, or the
10 thought, that more vehicles means more sustainable stations
11 in terms of fueling. The one thing we hate to see is public
12 funds go towards projects, particularly fueling projects,
13 that ultimately later are ripped out because they do not
14 have enough volume to sustain themselves, and so we want to
15 commend you on that. We also want to say that, by funding
16 vehicles like, for example, in our industry, you are helping
17 us combat the incremental costs associated with those
18 vehicles, and we are certainly seeing in our industry in
19 various sectors, for example, the refuse fleets, their
20 incremental costs have come down significantly since the
21 introduction of natural gas refuse trucks, and we would like
22 to see that, of course, be carried out throughout the
23 various sectors, especially the heavy-duty branch, which
24 could reduce greenhouse gas significantly, but also increase
25 the volume of low carbon fuels on the order of magnitude of

1 20,000 gallons per year.

2 I also would like to say that we are very proud
3 that the light duty sector was included in this round. We
4 think that it is a very important sector. Those vehicles
5 achieve an Advanced Technology Partial Zero Emission Vehicle
6 rating, which is a very important goal to be maintained, and
7 we think that, with the advancement of product, especially
8 through additional manufacturers or OEMs like Fiat and GM
9 placing a renewed interest in the market of natural gas
10 vehicles, we will continue to see improvement upon those
11 vehicles, and hopefully achieve an enhanced ATPZEV category
12 in the future.

13 I also would like to thank the Commission and the
14 staff for the enhanced characterization of the greenhouse
15 gas performance for liquefied natural gas trucks. And I
16 would further say that, unfortunately, well, let me say
17 this, we are strong supporters of the Low Carbon Fuel
18 Standard. We have always been supporters of the Air
19 Resources Board's efforts, and we also think that this is
20 the right direction to go in terms of a fuels market.
21 Unfortunately, under the Low Carbon Fuel Standard, the
22 energy efficiency ratio is more reflective of legacy fleets,
23 .9 is not reflective of a product that you would receive
24 today. So, what I would like to tell the Commission and the
25 staff and the Advisory Board is that the product that you

1 will be purchasing is more reflective of a .94 or a .95 for
2 spark ignited engines, and a 1.0 for a high-pressure direct
3 injection engine that you would be purchasing. So, I think
4 the greenhouse gas benefits, although improved in the
5 report, are actually still under-estimated, but that is good
6 news in terms of our goals, and I believe that this industry
7 will continue to innovate and provide better and better
8 performance, especially as we continue to push in biomethane
9 from various sources in our product line.

10 And then, finally, I just wanted to emphasize
11 something that was really important, that I was the culprit
12 for texting Tim in terms of the implementation of funding -

13 VICE CHAIR BOYD: From across the room?

14 MR. CAMPBELL: From across, well, you know, I did
15 not want to look like I was a big gnat on his shoulder, but,
16 unfortunately, I am not a grant person, and I do not have to
17 file grants, I get the more enjoyable job of creating great
18 programs like AB 118, and seeing it have a real impact on
19 the direction of California. But, the real frustrating
20 issue - and I really appreciate the comments that I have
21 heard up to this point - is that we want the same things you
22 want, we want to implement and put these projects together
23 as fast as we can so that we show product and results to the
24 Legislature. This is especially critical, given the
25 budgetary times, and we are ready to put that capital to

1 risk, to make you guys, the Commission, as well as the
2 Advisory Committee, and the staff, look really good. What
3 we understand is that, if we commit capital, we may not be
4 able to qualify for a project that has already been awarded,
5 and that is extremely frustrating, being a participant that
6 wants to support green jobs in California, that wants to
7 expand the infrastructure to help the Air Resources Board
8 achieve the Low Carbon Fuel Standard goals, but also, more
9 importantly, to support the fact that these programs have
10 real impact and real change when we are looking at trying to
11 move in a new direction of low carbon fuels within the
12 state. I kind of draw the example to my soon to be four-
13 year-old stepson, you know, if it was his birthday, and I
14 give him a notice in a box that he is going to get a *Buzz*
15 *Lightyear*, but I may not get the money for another six
16 months, and then, by then I have to mail order it, whenever
17 that happens. I would have an instant meltdown on my hands.
18 I kind of see that in the same vein is that we have
19 customers that are California businesses, that are looking
20 to make a change in a very tough economic time, and they
21 would like to have execution if they are going to make a
22 chance, and so anything that this Commission can do,
23 anything that the Advisory Committee can do, anything the
24 staff can do, that could help increase the efficiency of our
25 ability to implement - and we are willing to take on the

1 risk - we would greatly appreciate it, because the lag time
2 is very very long, and what we would hate to see is if we,
3 unfortunately, are in a system that is too archaic and has
4 problems, and we would lose a customer because of it. The
5 last thing we want to do is, "Thank you for giving us the
6 award, but we have to turn it back because the customer is
7 no longer interested." With that, thank you for your time.

8 COMMISSIONER EGGERT: Thank you very much, Todd.
9 And we were just having a little bit of a sidebar here, I
10 mean, this is definitely something we are hearing loud and
11 clear, and we will explore the full flexibility that exists
12 under the law, and even maybe contemplate even the law if it
13 looks like it is something that can be tackled.

14 VICE CHAIR BOYD: We have good people here who can
15 help us with the law.

16 COMMISSIONER EGGERT: Yes, and I agree, and I
17 think some of the recent advancements in natural gas
18 vehicles is very exciting, and as we sort of further refine,
19 as we were talking about before, the distribution of the
20 funds within that category, we will look to receive from -

21 VICE CHAIR BOYD: There was total legislative
22 support for this program in a hearing many of us were in the
23 other day, so there is a cadre of legislators who have heard
24 this and might be able to help us, and it is truly the
25 statutes.

1 COMMISSIONER EGGERT: They are all warmed up and
2 ready to - okay, next up is Matt Horton from Propel.

3 MR. HORTON: Thank you very much. I appreciate
4 the opportunity to be here and make a few comments today. I
5 want to start also by recognizing all the efforts that have
6 gone into this Investment Plan, and also the great work that
7 is being done to protect this pool of money from hands that
8 would look to reach in. I am representing Propel Fuels
9 today, the company that Brooke Coleman was speaking about,
10 that moved here from the State of Washington, specifically
11 to take advantage of the opportunities created by this
12 program. Many of you probably know something about Propel
13 already, we build infrastructure for a variety of fuel
14 types. Today, we are focused on E85 infrastructure and
15 biodiesel. We are engaged in a hydrogen demonstration
16 project and have been in discussions on some potential EV
17 projects, as well, so we would like to take a fairly
18 flexible approach to fuel types and where we see things
19 going. But I did want to just make a comment today and,
20 again, there are a number of us that have been fighting that
21 battle to make sure that we have got some good stories to
22 show to the Legislature and others, to make sure that the
23 public understands the benefits of the programs like AB 118.
24 And in an economic, political, and budgetary environment
25 like we are in today, you know, I think it is more important

1 than ever that this program shows some very visible wins,
2 that we are able to show that we have immediately created
3 jobs - I know this has come up a number of times, but also,
4 importantly, that we can show real and measurable impact
5 today in terms of petroleum reduction, and CO₂ reduction.
6 And, finally, you know, as an industry, because I think we
7 are all in this alternative fuels industry working on this
8 same goal, and I think we have a real challenge in that we
9 have largely failed to involve consumers in a meaningful way
10 in this program. A lot of the technologies and programs we
11 have funded to date do not have a very visible consumer
12 application. And that is one of the things that Propel does
13 focus on, is publicly accessible infrastructure, focused on
14 renewable fuels.

15 So I did want to register a comment, you know, we
16 were a little surprised and a bit disappointed when we
17 noticed in this most recent version, specifically in the
18 category of E85 infrastructure, it was a pretty significant
19 decrease in the amount of funding available. And, you know,
20 for us, as we look at the fuel types that are out there, the
21 technologies, and the infrastructure platforms, the State of
22 California has the largest installed base of Flex Fuel
23 Vehicles of any state in the country, and we are close to
24 dead last in terms of per capita availability of
25 infrastructure. We think we have a tremendous opportunity

1 today, nearly half a million vehicles already on the road,
2 and we do not have to wait for automotive OEMs to promise us
3 numbers of vehicles for next year, they are already out
4 there. People are already driving them. And our experience
5 here in the State of California, selling fuel to real
6 customers today has shown us that there is a lot of demand
7 out there, we just need to take the infrastructure to those
8 customers. So, I do not want to talk too much about our
9 company, in particular, but I do just want to leave with the
10 thought that, you know, we have already moved forward based
11 on some grants that we got from DOE and the Energy
12 Commission, we are spending dollars today, I would echo
13 Tim's and Todd's comments about let's work together on
14 speeding that process up. But, finally, as we look at the
15 allocations in this funding program, there are lots of
16 categories that are somewhat uncertain, or do not have a
17 great track record in immediately deploying the
18 infrastructure, and with E85, in particular, it is one
19 program that we know immediately creates jobs, immediately
20 reduces millions of gallons of petroleum, and has a
21 significant CO₂ impact today. So, with that, I thank you for
22 the opportunity to comment.

23 COMMISSIONER EGGERT: Thank you very much, Matt.
24 And congratulations on the UL listing for the dispenser, I
25 know that was a tremendous accomplishment that I think is

1 going to pay significant dividends in terms of the ease of
2 getting those stations built quickly, and recognizing your
3 company, in partnership with us, as being one of the leaders
4 in doing so. So, moving down the list, and we want to hear
5 from everybody here today, Catherine Dunwoody, who is the
6 Executive Director of the Fuel Cell Partnership. I do have,
7 I guess, a process question, as Catherine is coming up. We
8 do have the beginning of our public meeting, which is now,
9 and I know we talked about the -

10 VICE CHAIR BOYD: Scheduled for now.

11 COMMISSIONER EGGERT: -- scheduled for now, yeah.
12 And, well, maybe we could have a conversation about how to
13 transition into the next part of the meeting, subsequent to
14 the public comment. So, go ahead, Catherine.

15 MS. DUNWOODY: All right, thank you very much,
16 Commissioner Eggert and Commissioner Boyd, I appreciate the
17 opportunity to comment today. Since the last time I was
18 here, the California Fuel Cell Partnership had published a
19 Progress and Next Steps Report, which is a report that
20 builds up the Hydrogen and Fuel Cell Vehicle Deployment Plan
21 that was published in February of last year. The Progress
22 and Next Steps Report lays out specific needs and planned
23 actions for this year and next, so through 2011, and there
24 is a number of different activities identified in there.
25 One of the key points, however, is the need for additional

1 stations, and we laid out a very specific list of seven new
2 and four expanded or upgraded stations that are needed,
3 based on the collective deployment plans of the automakers.
4 And we very much appreciate the current solicitation that is
5 out on the streets, there has been quite a lot of activity.
6 I know that the automakers are very actively collaborating
7 to ensure that they can provide support for the best
8 proposals that meet the needs that they have identified for
9 their customers, and it is a very collaborative and
10 coordinated approach that is aimed to maximize the utility
11 of the funds that are available, recognizing the limited
12 public and private funds to reduce risks and help ensure
13 success for this program.

14 Looking forward, we will need to continue to
15 expand the network in the coming years, and that is in order
16 to continue progress towards what we estimate are somewhere
17 on the order of around 40 new stations that were laid out in
18 our Action Plan, needed in California both to serve the
19 vehicles that are going to be deployed in this timeframe,
20 but also to prepare to launch the commercial market, which a
21 number of automakers have publicly stated they anticipate to
22 begin ramping up in the 2015 timeframe. So, as we all know,
23 infrastructure must be built in advance of vehicle
24 deployment, that is a very important principle here,
25 additionally, we need to continue to support renewable

1 hydrogen, it is a requirement for hydrogen as a
2 transportation fuel in California. We believe there is a
3 strong need to continue advancing station technology to
4 reduce costs and footprint, while also increasing capacity
5 to meet future commercial requirements and to support
6 growing transit and other heavy-duty needs. So, with those
7 things in mind, very supportive of the proposal that has
8 been put forward for continued funding for hydrogen in the
9 upcoming Investment Plan. Thank you very much.

10 COMMISSIONER EGGERT: Thank you, Catherine. Next,
11 I have Cindy Wilcox from Wilcox Consulting - in
12 collaboration with the Southern California Marine Institute.

13 MS. WILCOX: Mr. Boyd, Mr. Eggert, and the
14 Advisory Committee, the result, this document and all the
15 work you have done, it is a great resource for us. I want
16 to start by saying that Dr. Larry Allen of the Southern
17 California Marine Institute submitted comments to the Docket
18 on June 24th. I gather we were late getting into the process
19 and they were not included in the first draft here, so I
20 wanted to present to you in person today. I am Cindy
21 Wilcox, I am with Wilcox Consulting, and we are
22 collaborating with the Southern California Marine Institute
23 on this project. Let me just mention that the Southern
24 California Marine Institute is a consortium of major
25 universities in Southern California to do marine research.

1 It includes Cal State Northridge and Cal State Long Beach,
2 Fullerton, Los Angeles, University of Southern California,
3 and it has just recently been joined by UCLA. This is a
4 powerhouse group of universities with great research and
5 problem solving capability and we currently, by the way,
6 have a grant application in the USDA and I know we are all
7 talking about USDA and the opportunities there, so I wanted
8 to mention that we are moving on that.

9 The Southern California Marine Institute is
10 evaluating open ocean farming - open ocean farming of
11 California giant kelp, which is *Macrocystis pyrifera*, and I
12 see you all nodding. It is a high grade biomass feedstock.
13 It has several positive characteristics.

14 VICE CHAIR BOYD: We read your letters.

15 MS. WILCOX: Oh, good. It is a fast growing
16 plant, for the benefit of the Advisory Committee, it grows
17 30 centimeters a day, that is about a foot a day. It grows
18 in the open ocean, so it does not compete for land. It does
19 not compete for fresh water. It is a macroalgae, which
20 means it does not have lignin or cellulose and is therefore
21 easier to process than some of the alternatives. The top
22 section of the plant is harvested several times a year, that
23 leaves the farm intact, right? And it is composted for
24 biomethane, with a processing system that is similar for
25 capturing methane from animal manure at dairy farms, so it

1 is something we understand. The proposal is to grow the
2 kelp on rowed grids. The rowed grids circulate in farms in
3 the open ocean and they are guided by robotic submarines,
4 that keeps them in circulation patterns. This concept was
5 first pioneered by the U.S. Navy in the 1970s, it was a
6 national security issue, back those of us that remember,
7 during the oil embargos. So, the Navy started out looking
8 at this because they needed diesel fuel to run ships. Their
9 proposal turned out to be large farms, fairly expensive
10 farms, because they needed to bring the nutrients up from
11 the deep ocean. For those of you that are not familiar with
12 the ocean, the top layer of the open ocean out there beyond
13 the Channel Islands is fairly lacking in nutrients, the
14 nutrients are in deep water. So, the Navy proposed to bring
15 the nutrients up from the deep ocean, that was fairly
16 expensive infrastructure, as you can imagine. And back in
17 the '70s, they did not have the automation opportunities
18 that we have today, the GPS systems, all those things that
19 we can think about routinely now, and remarkably routinely.
20 So this was a Navy proposal. Well, the oil embargos ended
21 and the Navy dropped the project over time and went back to
22 normal fuels. But, at this time, we are proposing an update
23 of this idea, and the update is to have these kelp farms out
24 in the open ocean, to have them guided by submarines that
25 would basically take the plants down to the nutrients, so

1 instead of upwelling water, which is pretty expensive to do,
2 we would take the plants down to the nutrients, then
3 resurface for sunlight during the day. Biologists have
4 shown that you can expose plants to nutrients and sunlight
5 at separate times and the plants will take in the nutrients
6 and process them later, so it is a pretty innovative idea.
7 Also, by the way, we can avoid passing ships because our
8 systems will see the ships coming, will hear them, will send
9 the plants down out of the way of passing ships and large
10 storms. We will nudge the plants in the plant farms into
11 the harvesting stations at appropriate times.

12 So kelp is a fast growing plant, it would be a
13 marine biomass resource, it takes something on the order of
14 1 percent of the oceans to supply all the energy currently
15 used by humanity. So, it is remarkable that if you just
16 take small sections of the ocean and put them under
17 cultivation, you can supply tremendous amounts of energy.
18 The kelp can be readily composted into a carbon neutral
19 source of natural gas and injected into the pipeline
20 network. And also, using a legacy fisher trough system, or
21 an updated conversion system, the natural gas can be
22 converted to liquid fuels such as diesel, jet fuel, or
23 gasoline. So, it makes a fuel resource for liquid fuels.

24 We are recommending that the California Energy
25 Commission include information about kelp in the Natural Gas

1 section of the Investment Plan, and provide grants of about
2 \$500,000 per year for the next three years to test this
3 method of growing kelp. Depending on funding, this project
4 could be producing industrial quantities of natural gas and
5 liquid fuels for transportation in five to seven years.

6 Just a recap, this project started with U.S. Navy
7 in the 1970s to provide domestic sources of fuel, but it
8 also positively impacts air quality, fuel diversity, and
9 climate change and is a very positive impact. And the
10 Commission may be aware, and I do not know, but right now
11 the Department of Defense has issued a request for
12 information. The Department of Defense is looking for
13 biomass derived diesel fuel and jet fuel to supply the
14 Pacific Fleet. In their documents, DOD tells us that the
15 military in Hawaii is using about 125 million gallons of
16 fuel a year. And so, basically, this leads to the need for
17 multiple inputs for the fuel system, diverse biomass
18 resources. And basically, what I would like to see is for
19 California not only to approve fuels for California, but
20 also to be able to supply the Department of Defense and the
21 Western Hemisphere with all their needs. And that feeds
22 into the fact that we need these jobs here in California.
23 We should be designing our submarines here and our
24 harvesters here. We should be learning to grow juvenile
25 kelp on big rowed grids, starting these jobs in California,

1 keeping them in California, and continuing California as a
2 leader in technologies that are essential to the nation.
3 And thank you for this opportunity to address you.

4 VICE CHAIR BOYD: Well, thank you. That is a very
5 interesting concept. A couple quick questions.

6 MS. WILCOX: Sure.

7 VICE CHAIR BOYD: Does kelp qualify in the algae
8 family at all?

9 MS. WILCOX: Yes, it is a macroalgae.

10 VICE CHAIR BOYD: So it is not excluded from our
11 program, which makes reference to algae. Secondly, just for
12 your information, we discussed the letter and the subject
13 matter, and I would tell you that this is such a researchy
14 [sic] area, still, that we questioned whether it really is
15 appropriate for the 118 program, however, we have another
16 research program at this agency, Public Interest Energy
17 Research, and you will probably be hearing from somebody in
18 that program to inquire a little bit more about your
19 project. It, if it has any funds available, may be a better
20 fit there if we saw our way clear, than the 118 program,
21 which when we were before lots of the people here and
22 ultimately the Legislature was much more interested in the
23 last two D's of RD&D, and they wanted the Demonstration and
24 Deployment, which is what we try to aim for a little bit
25 more, but it is fascinating. Last question, quickly. Have

1 folks looked at, you know, if you are taking this new hungry
2 foot source down to where the nutrients are, are they taking
3 nutrients away from some other part of the marine ecosystem,
4 so to speak?

5 MS. WILCOX: Well, out in the open ocean, as far
6 as we know, it would not be a threat to any other species or
7 any other system out there. The open ocean is not as lively
8 as we sometimes expect, that an awful lot of the fishing and
9 so on that is going along on the coastlines where the water
10 is naturally upwelled, so the water is naturally upwelled
11 along all the coastal areas, and the open ocean just is not
12 as rich with fish as many of us think it would be, or other
13 species that we might recognize. We do not see that as an
14 issue. We are interested in other public energy research
15 dollars, absolutely. I think it is important to realize
16 that the Navy did a demonstration project, so a lot of the
17 demonstration work has been done. They converted kelp into
18 fuel, they finished with seven volumes, I mean, it is stacks
19 like this, in their report, so the Navy has put a lot of
20 work into this, it is not a brand new concept, converting
21 kelp into fuel. And I would appreciate if the Energy
22 Commission would take that into account. And thank you for
23 your time.

24 COMMISSIONER EGGERT: Thank you very much. And I
25 would just, building upon the comment of Commissioner Boyd,

1 is we are looking for -- increasingly looking for
2 opportunities to make closer connections with our research
3 program, so as technologies come kind of out of the lab and
4 are moving into more the second and third D, that we can be
5 there to sort of catch them and help facilitate their
6 transition to the final D and C, I guess, the commercialized
7 market. So, next up, Tom Fulks. We have three more, by my
8 count.

9 VICE CHAIR BOYD: Commissioner Eggert, why don't
10 you ask your survey question that you suggested a while ago?

11 COMMISSIONER EGGERT: Okay. So, we do have, I
12 guess, yeah, a process where we are going to try and see if
13 we can get some insight through a survey of the audience
14 that is here. So we do have scheduled a public meeting that
15 would be basically a continuation of this meeting, but
16 focused on the Investment Plan, with a presentation which
17 would go over a little bit more of the detail of the plan,
18 but a lot of the same material which was covered this
19 morning. And I guess the question is, how many members of
20 the public are here, that were not here this morning?

21 VICE CHAIR BOYD: Or, in other words, how many
22 people are here for the public hearing, rather than just the
23 meeting of the Advisory Committee meeting? We have one
24 gentleman willing to admit that.

25 COMMISSIONER EGGERT: Any others? No.

1 VICE CHAIR BOYD: Carry on, Mr. Fulks.

2 COMMISSIONER EGGERT: Okay, so we will carry on.
3 Go ahead, Tom.

4 MR. FULKS: Commissioner Eggert, Commissioner
5 Boyd, thank you very much for allowing me to speak. My name
6 is Tom Fulks, with a company called Mightycom today, we are
7 representing the Daimler Fuel Cell Program. Very brief
8 comments. I just wanted to support the comments of the Fuel
9 Cell Partnership in terms of allowing this research to be
10 submitted to the record, and for your staff actually paying
11 attention to that research and that deployment plan, we
12 definitely appreciate that very much. I wanted to support
13 the solicitation that is on the street now, thank you for
14 that, support of the allocation for the 2010-2011 year, and
15 we look forward to further hydrogen allocations when the
16 next round of funding goes under the public review process.
17 So, thank you very much for that. Also, I wanted to
18 acknowledge the language change that was made in
19 acknowledging hydrogen fuel cell vehicles as electric
20 vehicles. They are electric vehicles and, for some reason,
21 in terms of perception, it is just great to get that
22 clarified for the record, and we definitely appreciate that.
23 And lastly, I was not planning on speaking at all today,
24 other than to support the staff recommendations, until I
25 heard your advisory member, Ms. Sharpless, comment that one

1 of the main motivations for hydrogen fuel cell deployment,
2 at least on the part of the OEMs, is for the ZEV mandate
3 compliance. I wanted to bring to your attention the
4 corporate philosophy of Daimler with regard to fuel cell
5 vehicles, is that Daimler views electric drive, whether it
6 is battery electric drive or fuel cell electric drive, as
7 the future for mobility in terms of vehicle mobility. There
8 is a very aggressive fuel cell vehicle program taking place
9 in Europe right now, Germany, in particular, and Daimler is
10 a full functioning participant in that market driven program
11 in Europe, and it views California as the most logical place
12 in the United States for a successful commercial market for
13 fuel cell electric vehicles. And, so, yes, it is
14 undisputable that there is a ZEV mandate that most
15 automakers are trying to comply with, but at least as far as
16 this company is concerned, that is not the sole, nor is it
17 the primary driver for why it is coming to California with
18 its fuel cell vehicle program. So I just wanted for the
19 record to state, at least for Daimler's case, that there is
20 much more at stake here than just ZEV compliance. So, thank
21 you very much for your time. I appreciate that.

22 COMMISSIONER EGGERT: Thank you very much, Tom.
23 Actually, just a quick question. Do you have a sense of
24 sort of what the expenditure has been, just for Daimler, in
25 terms of this technology?

1 MR. FULKS: Yes, the commitment to Daimler is
2 already spent, this is not just committed money, but it is
3 at least a billion dollars in fuel cell vehicle program
4 development since the 1970s, and so this is - when I am
5 hearing investors speaking about, you know, the risk that is
6 at stake here with regard to the amount of money that is
7 going into the various categories, I appreciate that very
8 much, but you also have to understand that one company alone
9 has put in a billion dollars, and if you multiply that times
10 every other OEM that is deploying not just battery electric,
11 not just plug-in hybrids, but fuel cell vehicle deployment,
12 as well, it is a whole lot of money that has already been
13 spent. And so the fueling and charging infrastructure
14 portion of this is - it is critical to the sort of
15 recapturing of that investment that has already been made.
16 So, that is why we are here to support it, we have a
17 definite financial interest and stake in this, so unlike
18 some members of your Advisory Committee who also have
19 financial stakes in this, who have unlimited amounts of time
20 to push their interests, in my three minutes I am going to
21 answer your questions and look out for my case for why this
22 ought to happen, and we appreciate your staff's support in
23 that regard.

24 COMMISSIONER EGGERT: Thank you very much. I am
25 sure nobody has unlimited time within this group, but I do

1 appreciate the input and the answer.

2 MR. FULKS: Thank you.

3 COMMISSIONER EGGERT: We have a couple more here
4 that have indicated a desire to speak. I have - I will not
5 get the name right - Jian Zhang from GRIDX, who would like
6 to offer perspectives from the trench.

7 MR. ZHANG: Thank you, Commissioner Boyd and
8 Commissioner Eggert. My name is Jian Zhang, I am the CEO
9 from GRIDX, which is a technology company based in Silicon
10 Valley. We are developing infrastructure technologies that
11 go to plug-in electric vehicles, charging infrastructures.
12 We are working with utility companies and charging network
13 providers to build out the infrastructures. I completely
14 appreciate the complexity in making the investment location
15 for the public funding. One, I completely understand that
16 the current investment is very much based on the current
17 loan needs and current loan economic drivers for the
18 investment. What I would like to share with you is that the
19 area of new needs and new drivers that we identified,
20 together with utility companies in California, which is the
21 financial infrastructures that you need to go with the
22 charging stations that you put out on the street. I think,
23 based on the numbers that I see from the Investment Plan,
24 about 10,000 to 20,000 charging stations that are going to
25 go into the State of California, each charging station

1 either home-based or public-based charging station will need
2 a financial backing to support them. If it is a home-based
3 charging station, you will need financial assistance to
4 implement tariffs, EV specific tariffs, such as the one that
5 CPUC approved for San Diego Gas & Electric last week.
6 Without the tariff, you cannot change the behavior of the
7 customer, and hence, to Jan's comment earlier, as to how to
8 integrate the electric vehicle with the grid, you really
9 need to have an economic driver to enable the customer to
10 shape the consumption behavior. Without the financial
11 infrastructure, the consumer cannot pay for the public
12 charging stations, and so that becomes a significant
13 adoption barrier to put more cars on the street. And more
14 importantly, it is about efficiency. When the charging
15 stations go out to the streets, basically the charging
16 stations that belong to different networks, some go into San
17 Diego Gas & Electric, some go into PG&E, some go to Coulomb,
18 some go to ETEC, and so on and so forth, and those networks
19 are not interoperable in the sense that a consumer that
20 belongs to Coulomb charging network may not necessarily be
21 able to buy his electricity for charging his electric
22 vehicles in other networks, for example. So, having a
23 financial infrastructure that integrates all these disparate
24 charging networks together is actually a very high leveraged
25 investment area for public funds. Thank you.

1 COMMISSIONER EGGERT: Thank you very much. And I
2 think you highlight an extremely important point. You know,
3 we have made an enormous amount of progress in electric
4 vehicle infrastructure in that we now established a standard
5 for the plug, which is the benefit of working together with
6 the automakers and the Society of Automotive Engineers --
7 excuse me, I think I might be picking up something that
8 Commissioner Boyd has here - and so that is a great relief,
9 to not have to worry about how many different plug types
10 there are, but you are absolutely right, the communications
11 protocol and the interaction with the billing systems and
12 other things is something I think we have to pay very close
13 attention to, so that we are able to have different vehicles
14 charging at different locations when we need to. Okay, I
15 have one more here, it is Christopher Perkins from Unimodel
16 Systems.

17 MR. PERKINS: Thank you very much, Commissioner.
18 I very much appreciate this opportunity to address the
19 Advisory Board here and the CEC on, I think, a matter of
20 importance. Just to give you a little background about
21 Unimodel, we are the developers of SkyTran, it is a magnetic
22 levitation personal rapid transit technology that we are
23 developing at the NASA/Ames Research Center in Mountain
24 View, California. I am here today on behalf of Unimodel and
25 join over half a dozen cities, transit authorities and

1 public officials across California, who urge the program
2 here, the AB 118 program, to provide funding for a
3 demonstration of personal rapid transit through the newly
4 created and I think wisely created innovation category that
5 has been created in the plan. The purpose of this
6 demonstration project would be to assess the technology's
7 energy efficiency, greenhouse gas mitigation effectiveness,
8 and potential for congestion reduction. Personal rapid
9 transit is not an incremental solution to the crisis that
10 California faces, personal rapid transit, I think, is a
11 transformational disruptive technology that will offer a
12 quantum leap in personal mobility for Californians who are
13 used to either the choice of using a private automobile or
14 public transit, and it could be a Plan B, if you will, that
15 could meet California's key energy, environmental, and
16 sustainability goals, as outlined in AB 32 and SB 375. Now,
17 the commercial development of PRT has the potential to
18 deliver higher speed personal mobility at lower costs, more
19 safely, and with higher efficiency than electric vehicles or
20 current public transit technologies. Now, from a service
21 perspective, the versatility of PRT is unmatched by either
22 automobiles or public transit, as it combines the best
23 features of both. In this respect, PRT has the same
24 characteristics as automobiles as you get this on demand,
25 point to point service that a car provides us, a private

1 trip, so to speak. But it also gives us the kind of
2 throughput that we typically see with public transit, with
3 rail or bus rapid transit. Now, compared to other
4 transportation solutions, PRT is also the most energy
5 efficient per passenger mile traveled, and has the greatest
6 potential to reduce the automobile vehicle miles traveled,
7 which I know is a big goal of AB 32 and SB 375, and also, of
8 course, a focus of the AB 118 program. With this in mind,
9 the California High Speed Rail Commission is endorsing PRT
10 and is asking the 24 cities that will have high speed rail
11 stations to conduct PRT studies. The Board is interesting
12 in using PRT as a feeder system to improve - boost ridership
13 to the California High Speed Rail, and is also looking to
14 serve stations more effectively by reducing the need to use
15 automobiles to get to the stations and construct nearby
16 parking facilities, as well. Now, the funding of a PRT
17 demonstration project, I think, is consistent with AB 118's
18 goal of demonstrating innovative technologies that could
19 have near term commercial viability. In this case, the
20 proposed PRT demonstration would not only obtain critical
21 technical data and provide a basis for comparative analysis
22 with other vehicle types, but serve as a platform for
23 Government and regulatory review. Now, this is an important
24 point because, in developing new public transit technology,
25 which PRT certainly is, there is a need unlike with other

1 private automobiles for there to be a government component
2 in the deployment of these systems, so a demonstration
3 system would be very important as part of that process. But
4 most important, a demonstration system supported by the
5 program would act as a trigger to attract private financing
6 that is currently available to build privately financed
7 public transit in California. And they see that PRT has the
8 necessary economics to make that possibility happen. Now,
9 just as an aside, our company, Unimodel Systems, has three
10 Memorandums of Understanding with a firm, Infrastructure
11 Leasing and Finance Group, and this is to build PRT system
12 in San Jose, Santa Cruz, and Marin County, upon approval by
13 those jurisdictions. Now, these projects could spur a
14 growth of the PRT industry in California and serve as a jobs
15 and manufacturing engine with the potential to develop into
16 a major export industry for both the State of California and
17 the nation. In this respect, PRT should also be considered,
18 I think, for funding in the manufacturing category,
19 potentially, as well, as it is an electric drive system.
20 Now, it should be noted that first and second generation PRT
21 technologies are proven and demonstrated technical solutions
22 in Europe and Asia. Next generation systems under
23 development here in California, like our SkyTran system at
24 NASA promise substantial performance breakthroughs on the
25 technology being developed overseas. It should be noted

1 that there has been over \$200 million of expenditure for PRT
2 overseas. However, here in the United States, we find that
3 private investment in the U.S. is not available, given the
4 relatively long term investment cycle required to build
5 these types of systems. That is, to develop the technology.
6 In conclusion, PRT, like other surface transportation
7 options under consideration, I think, has the highest
8 likelihood of providing a comprehensive solution that
9 addresses all three vital goals of California policy, which
10 are improved energy efficiency, decreased greenhouse gases,
11 and congestion reduction. The AB 118 program has a unique
12 opportunity, I think, to bring jobs and manufacturing to the
13 state by jumpstarting this critical technology and making
14 California a world leader in this industry. Therefore, I
15 urge the program to provide funding for a demonstration of
16 Personal Rapid Transit through the Newly Created Innovation
17 category in the 2010 and 2011 Investment Plan. Thank you
18 very much.

19 COMMISSIONER EGGERT: Thank you very much,
20 Christopher.

21 VICE CHAIR BOYD: Could I ask a quick question.
22 You mentioned working at NASA/Ames, is this the focus of
23 your company's activities? Or are you working on that
24 development that they are planning down there, that rather
25 futuristic development on the property of NASA/Ames?

1 MR. PERKINS: Yes, we have -

2 VICE CHAIR BOYD: Do you integrate your system
3 into that development?

4 MR. PERKINS: Yeah, well, we actually - we are
5 located at the NASA Research Park in Building 14, where we
6 have a prototype of the technology, an operational Maglev
7 three-passenger vehicle, and 43-feet of guide-way. We have
8 worked with the Santa Clara Valley Transit Authority, the
9 transit agency that runs the light rail in Silicon Valley.
10 They sponsored our technology in a FTA, Federal Transit
11 Administration Grant, under the Recovery Act, the so-called
12 TIGGER Program, which was to bring energy efficient and
13 greenhouse gas reducing technologies to transit operations.
14 They proposed a 100 percent solar powered zero emission
15 system, using our technology, but outfitting it with a
16 number of solar panels and storage batteries, to connect
17 their light rail station at Ellis Street to the NASA
18 Research Park campus. Unfortunately, that grant was turned
19 down, I noted a number of solar power maintenance facilities
20 that did get the awards, and so we are seeing that, at the
21 federal level, there is not a lot of receptivity to this
22 approach, however, it should also be noted that the very
23 first PRT system in the world was developed by USDOT at
24 Morgantown, West Virginia, in the 1970s and, to this very
25 day, is still operating. There is typically 15,000 to

1 30,000 people a day, and having carried tens of millions of
2 people has not had a fatality or a serious injury, so we
3 know that the technology, the approach is sound, and that we
4 really just need to simply update with new technology and
5 broader deployment to bring the benefits to California.

6 COMMISSIONER EGGERT: Thank you very much.

7 MR. MCMAHON: Excuse me, I wonder if we might add
8 one more?

9 COMMISSIONER EGGERT: Okay, go ahead and please
10 come up and state your name and affiliation, please.

11 MR. MCMAHON: Brian McMahon, Executive Director of
12 the California Employment Training Panel Program.

13 COMMISSIONER EGGERT: Welcome, Brian. Thanks.

14 MR. MCMAHON: I sat here so long, I feel somewhat
15 compelled to make a few comments. I wanted to reiterate the
16 comments made by my colleague, Barbara Halsey, in terms of
17 the importance of continuing some continuity to support
18 workforce efforts. I very much want to thank the Commission
19 for its investment in '09-'10 dollars, and to the ETP
20 Program. We finalized our interagency agreement the first
21 week in June, on June 25th, we took five projects to our
22 panel that were based on guidelines that we had jointly
23 developed with Commission staff. We now need to have the
24 funds re-appropriated through the Budget Act. During this
25 gap, we will continue to market the program, develop

1 projects, and have them staged and ready to go when there is
2 a budget in place. We have authority to spend those funds.
3 My concern is that we are developing a fairly large pipeline
4 of demand for these program dollars. To leverage your
5 funds, we will use our program monies, as well, but I do
6 believe that we will vary significantly exceed the carryover
7 funds from the '09-'10 allocation. My estimate is that, by
8 December of this year, we will be through the full
9 allocation of funds and would - and I certainly understand
10 the balancing efforts that you need to go through, but
11 wanted to reiterate the desire to continue to fund these
12 projects into the first six months of 2011. And we will
13 continue to work with staff on these issues and look for
14 options, I assume.

15 COMMISSIONER EGGERT: And I appreciate the input,
16 and, actually I am trying to remember, have you provided
17 sort of the timeline estimates of expenditure and cash burn,
18 I guess you might say, out to that December time period? Do
19 we have that as input?

20 MR. MCMAHON: Partially. We have a meeting
21 scheduled over the course of the next week to go into the
22 marketing of the next phase of funding, so we will go into
23 that in greater detail.

24 COMMISSIONER EGGERT: Okay, that would actually be
25 really helpful. And, yeah, I know, I think it has been said

1 here before, but these programs have a lot of great
2 potential and I do think we want to see them succeed and
3 continue on into the future and provide the handoff of the
4 trained workers to the program participants who are
5 receiving our funds on manufacturing and vehicle development
6 and deployment, and I know some of that is already -

7 MR. MCMAHON: Just a final point from the ETP
8 model, we largely fund income to workers, so we are there to
9 help companies upgrade the skills of their existing
10 workforce as they emerge and move into the AB 118 consistent
11 sectors, and we do also work with the Governor's Office of
12 Economic Development very closely, so that ETP becomes an
13 incentive for companies that are considering a new location,
14 or expanding operations in the state.

15 VICE CHAIR BOYD: You are involved with and were
16 referenced at the EVI event a week or so ago, if my memory
17 serves me right.

18 MR. MCMAHON: They were among our first group of
19 projects we brought to the panel.

20 VICE CHAIR BOYD: Ours, also.

21 COMMISSIONER EGGERT: Again, I think that is a
22 great success story, already, at this early stage. So,
23 actually just one other question. Are you pursuing funds
24 from other sources? And does there look to be any other
25 potential opportunities here?

1 MR. MCMAHON: Well, we have our core program
2 funding which is still holding intact. The Governor
3 introduced full funding for our program, which would give us
4 the ability to fund about \$30 million in additional
5 projects, should our funds hold up through the budget
6 process. If that is the case, then we will be able to use
7 those funds in part to leverage AB 118 funds in projects, as
8 well.

9 COMMISSIONER EGGERT: Excellent, thank you very
10 much.

11 MR. MCMAHON: Thank you.

12 COMMISSIONER EGGERT: Okay, I think what I am
13 going to propose, given the fact that some of us have not
14 left the room in four and a half hours -

15 VICE CHAIR BOYD: Is there anybody on the phone?

16 COMMISSIONER EGGERT: Oh, yeah, I am sorry. Yeah,
17 we do have folks participating through WebEx. I did get a
18 signal that nobody has raised their hand electronically or
19 provided a comment through the comment box. So what we have
20 done is we have unmuted everybody, so for those of you on
21 the line, if there is somebody who wants to provide a
22 comment, just chime in, and state your name and affiliation.
23 So we do have a question, is that -

24 MR. CARMICHAEL: While Leslie is working on that,
25 I am curious about the public hearing this afternoon and if

1 the one or two people that are here in the audience for that
2 public hearing really came just to make some comments, I
3 wanted to make sure they are aware they could - well, I am
4 thinking they could just carry on like the comments we have
5 been listening to, if that is why they are here. If they
6 are here for a presentation on the plan, that is a different
7 matter. I just wanted to put that out there, that might be
8 a way to proceed.

9 COMMISSIONER EGGERT: So that is a good
10 suggestion. If any of the members of the public that have
11 come for this afternoon wanted to make a comment, we do also
12 have another, I guess, opportunity that there might be other
13 folks joining online, you know, that will be coming into the
14 discussion for the second half. So, I think what my
15 suggestion was going to be is that, at the conclusion of any
16 further questions or public comment from the WebEx, we would
17 take about a 10-15 minute break and then actually reconvene
18 for the next half of the meeting, kind of get a perspective
19 on the lay of the land at that point, and then go forward.
20 And actually I think, if you look kind of at the agenda, you
21 know, we think that we can probably go through the two
22 presentations, the overview, and move on to the concluding
23 public comments, and we will probably end up maybe only a
24 half hour or so behind. I know that seems like a stretch
25 goal, but -

1 VICE CHAIR BOYD: There is a gentleman there who
2 is actually filling out a blue card.

3 COMMISSIONER EGGERT: Okay, so go ahead and let's
4 take - there is a question from online for now.

5 MS. BAROODY: Okay, here is it. This is from
6 Toby. "Evaluating project proposals for these solicitations
7 no doubt requires extensive staff time and resources. For
8 those projects that passed the 2009-2010 solicitation, but
9 were not awarded, will there be a condensed application
10 process if they submit the same proposal for the 2010-2011
11 solicitation?"

12 COMMISSIONER EGGERT: So the question, just to
13 clarify, is whether or not -

14 MS. BAROODY: Will there be a condensed process
15 for the next solicitation?

16 COMMISSIONER EGGERT: I guess it depends on the
17 definition - certainly relevant to our earlier discussion,
18 we will be looking for every opportunity to shorten the
19 timeline from the conclusion of the Investment Plan and the
20 solicitation - actually, one thing we want to make sure we
21 do not shorten is to provide sufficient time for the
22 applicants to prepare their application. I think if there
23 is any part of the process, that is the one we want to
24 sustain, or in some cases we have even gotten feedback that
25 it could be slightly longer. Tim?

1 MR. CARMICHAEL: Well, I just wanted to clarify.
2 I think this person is referring to a scenario where they
3 applied last year and they were not picked, do they need to
4 do the whole process again? Or, is there any way the staff
5 can, you know, take last year and just some sort of
6 notification that they want to apply again? They are
7 looking for a shortcut so they do not have to go through the
8 whole process. Again, if it is the same proposal and they
9 are just hoping that the pool is better this year for their
10 project.

11 COMMISSIONER EGGERT: So something - well,
12 certainly to the extent that the solicitation is similar,
13 they could reapply and if it was matched with their existing
14 proposal, they could resubmit. I mean, we also, we are
15 exploring a number of different ideas about how to provide
16 opportunities to expedite the process, including whether or
17 not there might be opportunity to look at existing
18 solicitations and those that perhaps were just below the
19 line, that if new money becomes available - we actually do
20 have - I mean, we have a question which is, what happens if
21 project do not proceed either because the investors have
22 walked away, or the project is no longer interested in
23 receiving the funds, so we are exploring all of that
24 currently and I do not have an answer, but I think, yeah, to
25 the general point, it is certainly encouraged for those who

1 are unsuccessful, and a new solicitation becomes available,
2 that is still relevant to reapply and hopefully be able to
3 make use of all the materials that were previously
4 developed. So we do have another person here who has joined
5 us to provide a comment. Mr. Ron Retterer, who is with
6 CalGreenatWork.

7 MR. RETTERER: Thank you. Very briefly. At the
8 suggestion of GoEd - what we wanted to propose is, we are
9 working on jobs creation, economic development with the use
10 of green innovation technology, particularly at the
11 suggestion of GoEd, there is a particular technology, a non-
12 plug-in electric vehicle hybrid vehicle that was presented
13 at the Transportation Forum for the Governor, and also at
14 SMUD. This would eliminate the need for charging stations,
15 if you eliminate for a very very smart grid infrastructure
16 makeover, and we would like to have that included as a
17 category in next year's considerations for Innovation.
18 Again, non-plug-in electric hybrid vehicle.

19 COMMISSIONER EGGERT: I am curious, could you
20 maybe just expand a little bit upon where the power is
21 coming from as a hybrid?

22 MR. RETTERER: Yes, it is coming from some new
23 innovative power generation technologies and basically the
24 technologies create sufficient energy, enough that you
25 literally - you can get about 750 miles on a car, on about

1 five gallons of gasoline, or fuel, or whatever you want. It
2 is already being driven on the street, the proto is, anyhow.
3 And so it has the ability to come home, plug it in, and
4 power back to the Grid. And I would be happy to take you
5 out to the chicken farm where it resides and show it. GoEd
6 has had the courage to come out and visit it already, so the
7 invitation is there. But basically, what we are talking
8 about is highly efficient, maybe a 40-50 percent increase
9 efficiency in the power generator. And with that, you do
10 not need to use the electrical to do much except, once it
11 has been started, to launch it. And you use just
12 traditional lead batteries, so you do not have to go through
13 the lithium issue of recycling and high expensive issues,
14 too. So, what we have is a great opportunity that that
15 technology is also applicable to trains, boats, and a few
16 other things, and it is there, and it is already patented,
17 and it is a part of California technology now.

18 COMMISSIONER EGGERT: I appreciate the expanded
19 description and if you have more information, I would
20 welcome you to submit it to our Docket.

21 MR. RETTERER: I would love to do that. And then,
22 I do not know, part of that technology includes opportunity
23 to do range extenders on the existing technology you are
24 looking at in terms of hybrid vehicles, so I do not know if
25 you have a category, although you have fuel emissions, but

1 it has the capability of adapting both fuel and electric
2 range extenders.

3 COMMISSIONER EGGERT: So I know if it is the same
4 definition as the range extender that I am familiar with,
5 with respect to plug-in hybrids, yeah, there is a program
6 for some of those, that ARB is administering, and we talked
7 about the possibility of providing the option for the 118
8 funds to go towards that, as well. So -

9 MR. RETTERER: I would be delighted to get that by
10 e-mail to you, or through your offices, about four hours
11 yesterday, so I would be happy to do that.

12 COMMISSIONER EGGERT: Thank you very much.

13 MR. RETTERER: Thank you so much.

14 COMMISSIONER EGGERT: Okay, anymore on the phone?
15 No? Okay, I am wondering, during the break if there is an
16 opportunity to query the folks on the phone, to find out
17 what sort of audience we might have, to ask the question as
18 to who would be interested in having a subsequent public
19 meeting with the full presentation on the plan. I think,
20 with that, we are at the conclusion of this morning's
21 meeting. And I think I will keep my closing comments brief.
22 I just want to say that, again, I appreciate the
23 participation and the endurance of all those of you here
24 today, both the Advisory Committee and those from the
25 public. Certainly, I have heard a lot of things that have

1 been quite useful in terms of understanding the concerns,
2 suggestions, some of the opportunities that we have to look
3 at sort of where we are at with respect to this committee
4 draft as we go to the final draft. As I think I mentioned,
5 or maybe Commissioner Boyd mentioned at the beginning, that
6 not all of the decisions have been made, there still is the
7 opportunity for changes between now and the final, and so we
8 have got a challenging task ahead of us as we move towards
9 the final adoption, taking into consideration all of the
10 good input that we have received today. So, again, I
11 appreciate all your help and I am sure we are going to need
12 a lot more of it, going forward. So, I think, with that, I
13 will turn it back over to Commissioner Boyd, who has joined
14 us.

15 VICE CHAIR BOYD: I got a little bit of voice
16 back. Mr. Carmichael.

17 MR. CARMICHAEL: Just to reiterate something, I
18 think, if we are going to submit additional written comment,
19 it has got to be in next week. Is that what the request
20 was?

21 COMMISSIONER EGGERT: Yeah, I was going to say the
22 next two days, so maybe we could say by -

23 VICE CHAIR BOYD: You are hoping to post a
24 product? The 28th of the month.

25 COMMISSIONER EGGERT: Yeah, so maybe by Monday,

1 close of business.

2 VICE CHAIR BOYD: Works for me.

3 MR. CARMICHAEL: So, the 28th is a week from
4 Monday, right? If you want to finalize it.

5 COMMISSIONER EGGERT: So where do they go to? Oh,
6 to the Docket, yes. So we want to make it available to
7 everybody.

8 MR. CARMICHAEL: By the end of the day Monday.

9 COMMISSIONER EGGERT: Yeah, I think that is
10 probably necessary and, you know, again, this schedule has
11 been a challenge to us, but we are being mindful of a lot of
12 the comments, which is to move more expeditiously and the
13 sooner we can get to a final plan, the sooner we can get on
14 to actually writing the solicitations and getting the money
15 out the door, which is what everybody, I think, agrees is
16 top priority. I think that is all I had to say and -

17 VICE CHAIR BOYD: I am going to just quickly echo
18 and ditto all of Commissioner Eggert's comments about
19 thanking you all. I just want to say that I am feeling very
20 good about today and today's meeting and the time we have
21 spent together over the last couple of years, and I think we
22 have reached a point where, you know, we can really talk
23 about the issues and we can kind of understand everything
24 with regard to process, more or less, except you heard some
25 of the inside baseball stories about the process we have to

1 deal with, but we may need your help, but we may not. In
2 any event, I feel good about the synergisms that exist and
3 how we work on these issues and look forward to the future.
4 As I said, I suspect that the Budget Bill and all its
5 attached trailers might say something about changing our
6 process some, and that will affect the speed with which this
7 advisory committee has to get together and work on yet the
8 next Investment Plan, but, you know, watch the space, we
9 will keep you up to date on that subject. And I look
10 forward to probably, now that we have a little bit of -
11 well, hardly any breathing time, but it seems like working
12 even more closely with the other government agencies who
13 were represented here today have some issues we want to work
14 with; I think we always work closely with ARB, we will just
15 continue to talk even more. But same true with other
16 agencies with whom we have good relationships, but we need
17 more understandings among each other between the interface
18 of this program and their programs, and other workforce
19 training and creation of jobs is a good example, and we look
20 forward to smoothing that out a little bit. This will
21 provide a vehicle for better coordination between the
22 stovepipes of government than we have seen in the past. So,
23 thank you all very much for sticking with us today and for
24 being here.

25 (Adjourned at 1:56 P.M.)

1 (Back on the record.)

2 COMMISSIONER EGGERT: Okay, so we are going to
3 reconvene for the second portion, the public portion of the
4 day, and I suspect a number of the folks who are in the room
5 and are online. For those of you who are online, and if you
6 did come in around 1:00, you heard the conclusion of our
7 morning meeting with the Advisory Committee, which included
8 a significant amount of public comment and a significant
9 amount of discussion with the Advisory Committee meeting
10 that was very useful and very valuable to our deliberations
11 for purposes of finalizing the Investment Plan, so we did
12 not want to cut that short, and that has put us sort of well
13 into the afternoon here to start this second session. And I
14 think we have talked about kind of the best path going
15 forward and I think we want to be mindful of those who did
16 join late, including I think there are about a dozen people
17 who are signed in via the WebEx, so we are going to go ahead
18 and give the presentation on the program relatively
19 abbreviated and folks, if they want to get a detailed
20 investment plan, the full thing is online or posted with a
21 link to this hearing, so it should be easily accessible to
22 get the significant detail, all the gory detail, about sort
23 of the rationales and the specific dollar amounts. Let's go
24 ahead and kick this off, unless Commissioner Boyd had
25 something he wanted to say.

1 Okay, and actually, maybe just a real quick comment,
2 you know, as I had mentioned, we had a very rich discussion
3 this morning and just for background, we are sort of in the
4 final stages of coming to the final Committee Investment
5 Plan. I think the project date is July -

6 VICE CHAIR BOYD: The targeted posting date for the
7 final Committee Report is July 28th.

8 COMMISSIONER EGGERT: Okay, so that is when the next
9 iteration will be posted and then that would go to a
10 Business Meeting for consideration subsequent to that,
11 sometime in mid-August.

12 VICE CHAIR BOYD: August 11th.

13 COMMISSIONER EGGERT: August 11th, correct. So, I
14 think, with that, I would say go ahead and take it away and
15 we will go into the final Public Comment.

16 MR. SMITH: All right, Commissioner Eggert. My name
17 is Charles Smith. I am the Assistant Project Manager for
18 the Investment Plan, assisting Leslie Barody. This
19 morning, we covered the general changes to the Investment
20 Plan since the previous version. This afternoon, we would
21 just like to provide more of a general overview, perhaps,
22 for people who were not involved in earlier iterations of
23 the Investment Plan.

24 Brief notes on the program itself, established by AB
25 118 in 2007, subsequently amended by AB 109. The emphasis

1 of this program is to develop and deploy innovative
2 technologies that transform California's fuels and vehicle
3 types to help attain the State's climate change policies.
4 Here, we have a collection of the key policy objectives that
5 this program assists with, including petroleum reduction,
6 greenhouse gas emission reduction, of course, alternative
7 and renewable fuel use, and in-state biofuels production
8 goals.

9 The program had a seven-year original lifespan with
10 a sunset date of January 1st, 2016. In Fiscal Year 2008-
11 2009, we were allocated \$75 million; in '09-'10, it was \$101
12 million, and for the current fiscal year, it is \$108
13 million, which is reflected in our Investment Plan.

14 Briefly about the Investment Plan, the Energy
15 Commission is required to develop and adopt the Investment
16 Plan. The Investment Plan helps us determine the priorities
17 and opportunities for our program. The Investment Plan must
18 be updated annually. This is the first such updates. And,
19 finally, the Energy Commission must create and consult with
20 an Advisory Committee as it develops its Investment Plan, as
21 we did this morning.

22 Here is a brief history of the current Investment
23 Plan. In September-October last year, we held a series of
24 Fuel and Technology workshops across the state. On February
25 11th, we held our first Advisory Committee meeting, and that

1 asterisk is there to denote that that was the first version
2 of the '10-'11 Investment Plan, was published in advance of
3 that meeting. On April 30th, we had our second Advisory
4 Committee Meeting and we issued a revised staff draft
5 investment plan for that meeting. In late May, we held
6 three public workshops, one in Long Beach, one in Stockton,
7 one in San Francisco, to try to get broader input on our
8 investment plan. Today was our third Advisory Committee
9 Meeting and public hearing, and again, the asterisk
10 indicates that the Investment Plan that you are all
11 reviewing was produced specifically for this meeting. And
12 then, on August 11th, we anticipate the possible Business
13 Meeting adoption of the Investment Plan, and that will be
14 the final Committee Draft, which will incorporate any
15 comments that we have received since today, more or less.

16 A brief program update on our funding summary.
17 Jennifer Allen walked through a lot of this in the morning
18 and I will not go into much depth. We have done funding for
19 workforce development, our ARRA cost sharing, we have closed
20 three PON's, and we have already begun finalizing the awards
21 for some of these. We have an agreement with the Division
22 of Measurement Standards to assist us in meeting certain
23 certification requirements for certain fuels. We developed
24 an Interagency Agreement with the State Treasurer's Office,
25 a Master Agreement for \$39.9 million. We have closed two

1 Program Opportunity Notices, one for new biofuel plants, one
2 for manufacturing facilities, and our Ethanol producer
3 incentive program is underway. For hydrogen, we have a PON
4 that is closing this coming Monday for \$19 million, and we
5 anticipate a future hydrogen transit fueling agreement with
6 AC Transit for the amount of \$3 million. And then, finally,
7 we have four more categories for future solicitations and
8 agreements that will round out the initial funding from a
9 previous Investment Plan.

10 Now, for a brief summary of the Investment Plan for
11 the current Fiscal Year, we considered three broad
12 categories of input in assessing our allocations, the first
13 is a 2020 and 2050 analysis, and that backcasting the
14 different greenhouse gas emission reductions of different
15 fuel types. That was combined with a Gap analysis for each
16 fuel type that would help us identify the more immediate and
17 pressing needs of each fuel type, and then finally, we gave
18 consideration to non-GHG categories such as the Market and
19 Program Development category in our Investment Plan.

20 The funding allocation for Electric Drive, we have
21 allocated \$14 million for the development and demonstration
22 of advanced on-road and non-road medium- and heavy-duty
23 technology. You probably were all here this morning when it
24 was mentioned that the ARB would be funding the deployment
25 of light-duty electric vehicles, as well. We have \$3

1 million for electric drive infrastructure and related
2 activities, so this would include things like charging
3 rebates and any other perhaps coordination efforts that
4 could assist us in expanding electric drive infrastructure.
5 We have \$7.5 million for manufacturing facilities and
6 equipment. California is fortunate to have already
7 established a strong electric drive manufacturing industry,
8 and so we would like to play to our strengths in that
9 regard.

10 For Hydrogen, we are funding \$14 million for
11 hydrogen fueling infrastructure. As mentioned, we have a
12 \$19 million solicitation currently on the street until
13 Monday, and so I think that, between the two of those, we
14 will be able to have a good handle on future vehicle roll-
15 outs as provided to us by the automotive OEMs, thus far.

16 Under Gasoline substitutes, we intend to expand the
17 number of E85 dispensers and retail outlets to the tune of
18 approximately \$6.5 million. Gasoline substitutes production
19 in existing new and retrofit facilities, \$10 million, that
20 will also include funding for the continuation of our
21 Ethanol Production Incentive Program.

22 For Diesel substitutes, \$5 million for diesel
23 substitutes production, \$4 million for both terminal and
24 storage and vending facilities. I am not sure if this was
25 already addressed this morning, but the intent, of course,

1 with that, is to cover domestic and in-state - or to
2 prioritize, at least, domestic and in-state biodiesel. I
3 know that, in the past, when we have discussed this, people
4 have brought up concerns about the possibility of finding
5 funding for non-sustainable imports of biodiesels and diesel
6 feedstocks, and so we have tried to re-carve the language to
7 make it clear that that is not our intent.

8 For Natural Gas, we have allocated \$13 million for
9 light-, medium-, and heavy-duty vehicles, \$2 million for the
10 upgrading of natural gas fueling stations, and \$7 million
11 for biomethane production plants and quality testing, \$3
12 million for propane light- and medium-duty vehicles.

13 In the Innovative Technologies and Advanced Fuels
14 section, we have allocated \$3 million for the title of that
15 category, but then we have also recently incorporated \$5
16 million for Federal cost sharing opportunities that we
17 believe will help us leverage federal dollars for important
18 projects within the state.

19 In the Market and Program Development section, we
20 have allocated \$2.5 million for sustainability studies to
21 help ensure that our work and the work of other public and
22 private investment goes towards sustainable fuels and
23 technologies.

24 We have allocated \$2.5 million in Program, Marketing
25 and Public Education and Outreach funds, and \$6 million in

1 Technical Assistance and Environmental Market Technology
2 Analyses. And that covers sort of a broad spectrum of sub-
3 categories which are outlined in the final pages of the
4 Investment Plan.

5 And finally, as a closing slide here, sort of a
6 broad outline of our funding allocation summary by fuel
7 type. So, I think with that, we would like to open it to
8 any questions we might have. I do not know if there is
9 anyone here in the audience who still might have questions.
10 I think we went through a lot of those questions in the
11 morning session. Is there anyone in the audience? Seeing
12 none, perhaps we could open the phone lines and find out if
13 there are any questions from any of our online participants.

14 Okay, I have been told that the phones were muted,
15 so if there is anyone with a question or comment, please
16 speak up. Anyone? Okay.

17 VICE CHAIR BOYD: This is no reflection on you,
18 Charles.

19 MR. SMITH: I know. I have to take a little
20 offense. Okay, it sounds like we did receive comment from
21 someone, Monty Campbell, perhaps, who may not have access to
22 the phone at the moment, but we will - I do recall coming
23 across materials from Mr. Campbell in the docket, so we will
24 be reviewing those and incorporating them as appropriate
25 into the Investment Plan. So, unless there is anyone else?

1 No, then I think I will turn it over to the Commissioners.

2 COMMISSIONER EGGERT: Thank you, Charles. So, I
3 think there is at least one person here in the audience who
4 wants to make a comment, and we very much welcome that.
5 Again, for those of you here in the room and on the phone
6 who were unable to participate in this morning's session, I
7 guess, when are the transcripts made available from those,
8 usually it takes a few weeks to - but we were without the
9 benefit of our Recorder in the morning, so...

10 VICE CHAIR BOYD: It will be a partial transcript
11 because - but three days is the turnaround we have been
12 asking for, of late. I think this one will be simple -- we
13 get three days for the 12 13-hour marathon power phone
14 hearings.

15 MR. SMITH: To follow-up on that, it will be an
16 incomplete transcript, but we will have the complete WebEx
17 recording available online.

18 COMMISSIONER EGGERT: Excellent. Oh, go ahead.

19 MS. BAROODY: I was going to introduce - Henry
20 Servin, City of San Jose.

21 MR. SERVIN: Honorable Commissioners, thank you. In
22 the interest of your time, I will keep my comments very
23 brief. I represent the City of San Jose from its Department
24 of Transportation. We did submit to the record a letter
25 dated July 6th and we thank you for this opportunity to

1 speak. What I am doing today is asking that, on behalf of
2 the City of San Jose, that we respectfully request that the
3 California Energy Commission expand its portfolio of
4 technologies that you are including in this year's
5 Investment Plan, and one particular technology that we are
6 championing and looking at in terms of a first phase
7 feasibility study is the use of personal rapid transit as a
8 way of reducing vehicle miles traveled, carbon emissions in
9 Silicon Valley, and in a way to provide an alternative to be
10 able to connect from our Airport to our existing mass
11 transit facilities on either side. I will not go into the
12 details of the Personal Rapid Transit because I understand
13 other folks have already spoken, but in terms of our general
14 strategy, the reason that we ask this is that we feel that
15 personal rapid transit is a solution for us to facilitate
16 Smart Growth, reduce greenhouse gas emissions, and allow us
17 to be able to look at that next Center of Innovation. With
18 what was considered something that was far in the future, we
19 are now seeing being built in places like the United Arab
20 Emirates, United Kingdom, and now in Portugal, they just
21 opened their system this month, so we feel that San Jose
22 could be the test bed and innovation for personal rapid
23 transit in the United States of America. So we ask for your
24 consideration and look forward to a positive response. And
25 if you have any questions for us, I would be happy to

1 answer.

2 VICE CHAIR BOYD: Well, a quick comment from me, 1)
3 I would salute you for venturing into this field, as a local
4 government. The much neglected third leg of the school that
5 transportations that go beyond technology, beyond fuels, is
6 this reduced VMT, mass movement of people, alternatives, any
7 alternatives to the conventional ways, and it is
8 encouraging, and what better place that Silicon Valley to
9 hear that you are entertaining this? I, for one, am fairly
10 familiar with the technology, the years I have been here, I
11 believe I have had two or three meetings with the folks who
12 believe in this, so we have an understanding, and I would
13 suspect that Commissioner Eggert is aware, as well. Just
14 this week, we were talking about the need to think about
15 that neglected third leg of our transportation stool, so to
16 speak, so you are speaking to an audience of the two of us,
17 at least, who have interest in things like this. I am not
18 sure what we can do monetarily, but we will see. I mean, we
19 are open to the idea, it is very intriguing and I agree with
20 you, it would be great if we could be the state that
21 demonstrates something like this for our collective futures.

22 MR. SERVIN: Thank you, Commissioner Boyd.

23 COMMISSIONER EGGERT: Actually, just a quick
24 question. Do you have any - assuming that you could
25 successfully secure funding for this type of a project, do

1 you have a sense of sort of when that would come on line and
2 actually be moving a large volume of people?

3 MR. SERVIN: Yes, Commissioner. We currently are
4 funded by our local Santa Clara Valley Transportation
5 Authority to do our first phase feasibility study, to the
6 tune of about \$1.8 million. What we are seeking is to go
7 beyond that, into a Phase 2, and we would have to have our
8 funding in place to meet a City deadline of 2015 to have
9 that first leg connecting from our Airport terminals to our
10 remote parking facilities, Light Rail on the East, and our
11 CalTrans future BART on the West.

12 COMMISSIONER EGGERT: And I think, as I understand
13 the technology, this does require some right of way
14 considerations and has that all been worked out in terms --

15 MR. SERVIN: Yes, it has, Commissioner. We do have,
16 for the most part, using public right of way, and we have
17 also completed an Environmental document several years
18 before, when we were looking at an automated people mover
19 technology, as opposed to the Personal Rapid Transit
20 Technology.

21 COMMISSIONER EGGERT: Okay, thank you very much.

22 MR. SERVIN: Thank you.

23 COMMISSIONER EGGERT: Yeah, we had earlier Mr.
24 Perkins from the Unimodel Group, had given us a good
25 overview of their technology for this. Okay, I think we are

1 going to see if there are any folks online, maybe open up
2 the lines? So, the phones are open if you can hear me, and
3 you would like to make a comment as part of this workshop,
4 please go ahead and do so. Introduce yourself. So, hearing
5 none, I guess, well, before Tim takes off, did you have any
6 final words, Tim, given that you did the last man standing?
7 No? Okay. Thank you very much for sticking around.

8 VICE CHAIR BOYD: He does not want to say one more
9 word and then have me really tease him about who talks the
10 most.

11 COMMISSIONER EGGERT: I think, with that, we are
12 going to close this workshop, and again we want to thank
13 everyone, including the staff for their hard work in
14 preparing for this workshop, putting all the materials
15 together, and running what I thought was a very very
16 productive workshop, lots of input, lots of things to
17 contemplate, and I know we will be having some discussions
18 as we move towards the final version of the Investment Plan
19 for this coming year. And I think that is it. All right,
20 the meeting is adjourned.

21 (Adjourned.)

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