

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

In the Matter of:)
)Docket No. 11-ALT-01
2012-2013 Investment Plan for the)
Alternative and Renewable Fuel and)
Vehicle Technology Program)

Advisory Committee Meeting and Public Workshop

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

FRIDAY, FEBRUARY 10, 2012
9:00 A.M.

Reported by:
Peter Petty

APPEARANCES

Commissioners (and their advisors) Present:

Carla Peterman, Lead Commissioner, Transportation
Tim Olson, Her Advisor

Robert Weisenmiller, Chair
Sekita Grant, His Advisor

Staff Present:

Jim McKinney, Office Manager, Emerging Fuels & Technologies
Pat Perez, Deputy Director, Fuels & Transportation Division
Charles Smith, Project Manager, 2012-2013 Investment Plan
Jennifer Allen

Advisory Committee Members Present (* via WebEx)

Tom Cackette, California Air Resources Board
Tim Carmichael, California Natural Gas Vehicle Coalition
*Will Coleman, Mohr Davidow Ventures
*Lesley Brown Garland, Western Propane Gas Association
Peter Cooper, California Labor Federation
Tyson Eckerle, Energy Independence Now
Bonnie Holmes-Gen, American Lung Association
Steve Kaffka, California Biomass Collaborative (Courtesy
of University of California, Davis)
Ralph Knight, Napa Valley Unified School District
Brian McMahon, California Employment Training Panel
Program
Jack Michael, Recreational Boaters of California
Simon Mui, Natural Resources Defense Council
*Joe Norbeck, UC Riverside
Martin Schlageter, Coalition for Clean Air
John Shears, Center for Energy Efficiency and
Renewable Technologies
Scott Smithline, CalRecycle
Eileen Tutt, California Electric Transportation Coalition
*Justin Ward, California Fuel Cell Partnership (Courtesy
of Toyota Motor Corp.)

APPEARANCES (Continued)

Also Present (* via WebEx)

Public Comment

Matt Miyasato, SCAQMD

*Jeff Serfass, CA Hydrogen Business Council

*Beverly Bradshaw, Best, Best & Krieger, Victor Valley
Waste Reclamation

Nick Lapis, Californians Against Waste

Andreas Klugescheid, BMW Group

Mary Solecki, E2

John Clements, Kings Canyon Unified School Dist.

Bruce Balfour, Sandia

Catherine Dunwoody, CAFPC

Matt Horton, Propel Fuels

Neil Koehler, Pacific Ethanol & California Advanced
Energy Coalition

Michael Beasley, The Boeing Co.

Juanita Martinez, Smith, Watts & Martinez for Linde

Chuck White, Waste Management

Jon Van Bogart, Clean Fuels USA

Caroline Quinn, Bay Area Biosolids to Energy Coalition

John Boesel, CALSTART

Dan Davids, Plug In America

Obrie Hostetter, 350 Green

Mel Assagai, Navistar Inc. and Electrification Leadership
Council

*Nathan Lewis, JCAP

*Paul Staples, HyGen Industries

*Alana Chaves-Langdon, Ecotality

*James Provenzano, Clean Air Now

*Warren Smith

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P R O C E E D I N G S

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2 FEBRUARY 8, 2012 9:05 A.M.

3 CHAIR WEISENMILLER: Good morning. I'm Chair
4 Weisenmiller. I'd like to thank all of you for taking
5 the time to attend this meeting and also for reviewing
6 the Investment Plan. Commissioner Peterman, to my right,
7 is Lead Commissioner in this area, but I wanted to be
8 here today to listen to your comments.

9 As California moves forward with its
10 progressive energy goals, the Alternative and Renewable
11 Fuel and Vehicle Transportation Program continues to be
12 of great importance and provide essential support to
13 alternative and renewable fuel infrastructure.

14 I think those of you who have looked at the *New*
15 *York Times Magazine* article a couple of weeks ago on the
16 Iranian nuclear situation and Israel's plans have a
17 pretty clear sense that this could be very very important
18 to us in the longer term, or even in the near term.

19 I would like to thank the Legislature and the
20 stakeholders for making this program possible and
21 certainly thank the staff for their efforts over the
22 years to implement it, and look forward to its continued
23 success in the future.

24 At this time, I'm going to hand the floor over
25 to Commissioner Peterman, who again is our Lead

1 Commissioner in this area and who will direct today's
2 activities.

3 COMMISSIONER PETERMAN: Thank you. Good
4 morning, everyone. Again, welcome to this Advisory Board
5 Meeting. It's a pleasure to be here with you today and
6 start to carry the torch that Commissioner Boyd has
7 passed.

8 As the Chair has mentioned, alternative fuels
9 and transportation is very important for the state in
10 meeting its climate change goals and its low carbon
11 transportation goals, and excited to be a part of that
12 process.

13 Staff will get into the more specifics of the
14 Investment Plan for 2012-2013. The key message I want to
15 relay is that this is the first step in developing this
16 Investment Plan. There will be additional meetings with
17 the Advisory Committee as we review the draft, we
18 appreciate your comment and input, and a final draft will
19 not be done until May, so we welcome your feedback and
20 thank you in advance and staff for all the hard work.

21 Oh, one more part I have to do -- let's take a
22 second and introduce everyone on the Advisory Committee
23 and everyone at the table. So I'll start first with the
24 Commissioners' Advisors, to my right we have Tim Olson,
25 who is now serving as my Advisor and the Commission's

1 Advisor on Transportation; to the left of Chair
2 Weisenmiller, we have his Advisor, Sekita Grant. And
3 then I'll just ask everyone to start around the table
4 with Tom.

5 MR. CACKETTE: Good morning. I'm Tom Cackette
6 from the Air Resources Board.

7 MR. SHEARS: John Shears with the Center for
8 Energy Efficiency and Renewable Technologies.

9 MS. HOLMES-GEN: Bonnie Holmes-Gen with the
10 American Lung Association in California.

11 MR. MCKINNEY: Jim McKinney, Energy Commission
12 staff, Manager of the Emerging Fuels and Technologies
13 Office.

14 MR. PEREZ: Pat Perez, Deputy Director for the
15 Fuels and Transportation Division of the California
16 Energy Commission.

17 MR. SMITH: Charles Smith, Energy Commission
18 staff, Project Manager for the 2012-2013 Investment Plan.

19 MR. MCMAHON: Brian McMahon, Executive
20 Director, California Employment Training Panel.

21 MR. SMITHLINE: Good morning. I'm Scott
22 Smithline with CalRecycle.

23 MR. SCHLAGETER: Hi. Martin Schlageter. I'm
24 with the Coalition for Clean Air, hello.

25 MR. KNIGHT: Ralph Knight, Napa Valley United

1 School District.

2 MR. MUI: Good morning, Simon Mui with Natural
3 Resources Defense Council.

4 MR. MICHAEL: I'm Jack Michael representing
5 Recreational Boaters of California.

6 MR. ECKERLE: And Tyson Eckerle with Energy
7 Independence Now.

8 MR. CARMICHAEL: Tim Carmichael with the
9 California Natural Gas Vehicle Coalition.

10 MR. COOPER: Good morning. I'm Peter Cooper
11 with the California Labor Federation.

12 COMMISSIONER PETERMAN: Now I would ask of any
13 advisory -- oh, one more at the table?

14 MR. KAFKA: Sorry for being late, Steve Kafka,
15 California Biomass Collaborative and U.C. Davis.

16 COMMISSIONER PETERMAN: Great, thank you. Now
17 I will ask any Advisory Committee members who are on the
18 WebEx to please identify themselves and their
19 affiliation.

20 MR. WARD: This is Justin Ward. I'm Chair of
21 the California Fuel Cell Partnership and Advanced
22 Powertrain Program Manager for Toyota.

23 MR. COLEMAN: Will Coleman with Mohr Davidow
24 Ventures.

25 COMMISSIONER PETERMAN: Great. Anyone else on

1 the line?

2 MS. GARLAND: Lesley Garland with Western
3 Propane Gas Association.

4 COMMISSIONER PETERMAN: All right, thank you,
5 Lesley. If anyone else joins, just identify yourself and
6 we'll turn it over to staff. Thank you.

7 MR. NORBECK: Hello? Can you hear me? It's
8 Joe Norbeck from the University of California at
9 Riverside.

10 COMMISSIONER PETERMAN: Good morning, Joe.
11 Thank you for joining us.

12 MR. MCKINNEY: Good morning. Welcome,
13 everybody. Again, Jim McKinney, Manager of the Emerging
14 Fuels and Technologies Office. For this part of the
15 agenda, I'm going to do a brief overview and status
16 report on our program.

17 So the ARFVT, or Alternative and Renewable
18 Fuels and Vehicle Technology Program, and we're still
19 looking for an easier acronym to say, we're now in the
20 fourth year of a seven and a half year program. Thus
21 far, we've allocated over \$360 million; we have \$207
22 million of that locked up in contracts totaling 110
23 projects, that's a combination of direct grants, of
24 interagency agreements with our agency colleagues, and
25 various technical support agreements.

1 The current activities right now are working
2 like crazy to get out the next major round of
3 solicitations -- and I'll talk more about that at the end
4 of my part of the presentation -- actively managing the
5 grants from the first round, so, again, 65 grants and
6 another 20 or so interagency agreements. And then
7 executing final awards from that first set, it's a little
8 hard to say, but we actually have 10 agreements that have
9 not been executed, seven of those are with the
10 recipients, and for various reasons they have not signed
11 or returned the final document. We also have three
12 projects that are still in various phases of CEQA review
13 and compliance, so those clearly can't be executed.

14 In sum, for the major award categories and
15 types, and this will be a synopsis of the presentation
16 staff gave in December outlining the results of our
17 benefits report. So for Alternative Fuels production, or
18 biofuels, that includes biomethane, diesel substitutes,
19 and gasoline substitutes. These are production grant
20 awards. All of the biofuels projects that we fund are
21 very low carbon intensity projects, 25 grams of CO₂ per
22 megajoule or lower. Biogas, whether that's landfill gas
23 or anaerobic digested, is the lowest commercially
24 available in volume fuel product available on the market
25 in California today, that's between 10 and 12 grams per

1 megajoule. All of our projects are non-corn, non-soy,
2 feedstock-based, except for the modifications, very
3 important modifications, to some of the corn
4 biorefineries going on in the state. So, for example,
5 the Pixley Biogas project is seeking to use biogas as a
6 fuel substitute for natural gas on the boilers; and AE
7 Biofuels is installing a cellulosic processer at the
8 front end of their facility.

9 Our grants include sweet sorghum and sugar
10 beets, very important alternative feedstocks to corn.
11 And, on the algae -- or the biodiesel side, algae are a
12 predominant grantee there, there is tremendous potential,
13 there are also a lot of serious -- series of cost issues
14 and scale-up issues for that.

15 Turning to infrastructure, we put about \$50
16 million worth of program funds to that and some of these
17 next stats that I'm going to repeat come directly from
18 the Benefits Report. So for E85 Stations, we are adding
19 85 stations to the current mix, and that's going to
20 triple the number of E85 stations at full build-out.
21 Propel Biofuels is our primary awardee and they are doing
22 a good job and have a very interesting, I think, business
23 model for that fuel product.

24 On the biodiesel side, those are bulk terminal
25 storage tanks which is kind of a choke point on

1 infrastructure for getting more biodiesel blends into the
2 retail markets. Electric charging stations we're
3 increasing by nearly four-fold the number of EV charging
4 stations or charge points here in California. We have
5 the nation's largest supply of EV charging
6 infrastructure.

7 Similarly for hydrogen, with our awards we're
8 doubling the number of hydrogen stations in California,
9 also making us the national leader in this area. And at
10 build-out, Commission funding will help accommodate for
11 75 percent of the through-put capacity, again, in this
12 fuel area.

13 Some of our awards on the EV side --

14 MR. CARMICHAEL: Jim? Just a quick question.
15 On this slide you're showing, the award has been made,
16 but the projects are in various stages of development.
17 Is that correct?

18 MR. MCKINNEY: Correct, right.

19 MR. CARMICHAEL: Thank you.

20 MR. MCKINNEY: I said "at build-out," maybe I
21 should say that again -- so, at build-out, these will be
22 the net results --

23 MR. CARMICHAEL: Thank you.

24 MR. MCKINNEY: -- for these awards. Turning to
25 Alt Fuel Vehicles, a lot of good action in this area, the

1 medium- and heavy-duty technology demos, so we have nine
2 projects in that area. Light-duty vehicles with our
3 award or transfer to ARB about 18 months ago, they were
4 able to put an additional several hundred vehicles on the
5 road through that.

6 Our HVIP transfer, that's Hybrid Voucher and
7 Bus Incentive Program, that's also part of the AQIP
8 Program, we've got 155 electric trucks on the road and we
9 were very pleasantly surprised with the way that market
10 segment is developing.

11 Natural Gas Vehicles, these are primarily
12 trucks, medium- and heavy-duty trucks, we've been able to
13 add over a thousand trucks to the state fleet in that
14 area, and also a good increase on propane.

15 The expected benefits from these award
16 categories, again, as we reported in the Benefits Report,
17 at 2020 depending on the range and assumptions in the way
18 these markets evolve, we estimate from 375 million
19 gallons a year to 1.2 billion gallons a year of petroleum
20 reduction.

21 This is a summary of some of the other award
22 categories and market support. The most important one to
23 highlight here is workforce training and development;
24 many thanks to Darcy Chapman for her leadership in that
25 area. We estimate that we're going to train 5,300 people

1 for work in these new technology areas. And I neglected
2 to say that, on the jobs front from those projects, I
3 very quickly summarized earlier, we're estimating almost
4 5,400 jobs in California in the greentech sector as a
5 direct or indirect effect of our funding program.

6 Another thing I want to highlight here, our
7 grant on fuel standards -- that's to CDFA -- Division of
8 Weights and Measures to develop retail standards for
9 hydrogen fuel which is a very important part of the fuel
10 cell vehicle roll-out and deployment strategy. And EV
11 readiness, I'd like to also recognize Leslie Baroody as
12 the team leader for this area. And these are planning
13 grants; we're getting a great return on investment, we're
14 putting up \$200,000 in these very innovative
15 collaborations at the regional level with NPOs, NGOs, and
16 industry are helping to plan and standardize what's
17 needed to get EV charging infrastructure into the market
18 as quickly as possible.

19 For this next part here, I'm going to very
20 quickly walk through the status of our current
21 solicitations, so as of this week we have all of our
22 major solicitations out on the street, so there are some
23 very big ones, the 16.9 or 16.7 million, for medium-duty,
24 heavy-duty, and advanced technology demos. We were
25 hoping to be able to announce that today, but the NOPA,

1 the Notice of Proposed Award, is still not up on our
2 website, so I'm afraid I'm not at liberty to disclose
3 those results.

4 Biofuels Production, \$37 million, that's out on
5 the street, we had a very good bidders workshop on that
6 one. The Buy-Down Incentive Program is working very
7 smoothly, that's primarily medium-duty and heavy-duty
8 natural gas trucks and propane vehicles, a very good part
9 of our program there. Advanced Vehicle Technology
10 Manufacturing, currently slated at \$10 million, but we
11 see a lot of opportunity to add to that pot of money
12 through something we call hedge room which is borrowing
13 forward from future investment plans, say perhaps this
14 one, to augment that subject area.

15 Alt Fuels Infrastructure, about \$30 million is
16 now out on the street and, as of yesterday our hydrogen
17 fueling infrastructure at \$18 million is also out on the
18 street.

19 And we have two major tech support agreements
20 that we're putting together, one with NREL, National
21 Renewable Energy Lab, a couple million dollars on that;
22 we are going to use them as our primary technical support
23 service provider, and then a similar complementary
24 agreement with U.C. Davis, Institute for Transportation
25 Studies, STEPS Program, Professors Joan Ogden and Dan

1 Spurling are Co-Directors of that Institute. So that
2 concludes my brief discussion on program status.

3 COMMISSIONER PETERMAN: I'd just like to
4 welcome Eileen Tutt, an Advisory Committee member who has
5 joined us at the table.

6 MR. MCKINNEY: And are there any clarifying
7 questions for this part of the program, the first two
8 staff presentations, we can take clarifying questions,
9 but discussion will be saved for the Advisory Committee
10 discussion part of the agenda.

11 MR. COLEMAN: Yeah, hi, this is Will Coleman.
12 Just a quick question. You mentioned the Benefits
13 Report. Is that, as described, inside the current
14 Investment Plan? Or is there a separate Benefits Report
15 that we can look at?

16 MR. MCKINNEY: There is a separate Benefits
17 Report; it's unfortunately a little tricky to find on our
18 website sometimes, if you go to the Drive website which
19 is our new kind of more user-friendly part of our
20 website, I think button 1 will take you directly to the
21 Benefits Report. It is CEC 600-2011-008; it came out in
22 December of last year. And we're always happy to direct
23 you to that directly, if need be.

24 MR. COLEMAN: Great. Thanks.

25 MS. HOLMES-GEN: I just wanted to ask --

1 whoops.

2 COMMISSIONER PETERMAN: If you would identify
3 yourself that would be great.

4 MS. HOLMES-GEN: Bonnie Holmes-Gen, I'm with
5 American Lung Association in California. On the hydrogen
6 fueling infrastructure, can you say when those stations
7 would be expected to be online through the solicitation
8 that's out now?

9 MR. MCKINNEY: I think that's a very important
10 question. From the last solicitation, we had two major
11 grants, one to Air Products Industries and one to Linde.
12 One of those was just executed a couple weeks ago, that
13 was a big Air Products Grant, \$11 million for eight new
14 stations in California. There is some serious financing
15 issues with hydrogen that may come up later in this
16 meeting, so specifically how to cover near term O&M
17 costs. We primarily provide capital cost funding because
18 there is this delay, or this gap, between getting the
19 infrastructure up and ready for the cars as they come
20 into deployment on the 2015-2017 timeframe. We need to
21 do some creative thinking on how to bridge that funding
22 gap for the stations.

23 MS. HOLMES-GEN: So more about that as we go
24 through the next --

25 MR. MCKINNEY: I imagine some other

1 stakeholders and Advisory Committee members may have some
2 observations on that.

3 MS. HOLMES-GEN: And could you mention again,
4 what's included in the Alternative Fuels Infrastructure
5 solicitation?

6 MR. MCKINNEY: E85 retail stations, EV charging
7 infrastructure, and I'm blanking on the third one -- ah,
8 I'm sorry, natural gas fueling stations, so that's
9 natural gas and biodiesel infrastructure -- thank you for
10 helping -- and propane. Right, I need more coffee.

11 MS. TUTT: Eileen Tutt with California Electric
12 Transportation Coalition. I'm just wondering what's the
13 thinking behind breaking down the solicitations between
14 hydrogen fueling infrastructure, specifically, and then
15 all the other alternative fueling infrastructures, why is
16 it not all --

17 MR. MCKINNEY: That's also a good question.
18 So, for example, one of the things that we could do this
19 year with the Alternative Fueling Infrastructure
20 solicitation is really focus on cost and figuring out
21 strategies to identify the lowest cost providers, so,
22 E85, EVSE, CNG LNG fueling stations, propane, that
23 infrastructure if relatively proven, there are a lot of
24 good business models out in the market, the technologies
25 are mature, so we're really focusing on cost and

1 geographic location. For hydrogen, there are a lot of
2 other issues that need to factor in to how we make those
3 final award decisions, so for that reason we've kept that
4 as a separate solicitation.

5 MR. SMITH: Good morning. My name is Charles
6 Smith with the Energy Commission's Fuels and
7 Transportation Division. I'm the Project Manager for the
8 2012-2013 Investment Plan. I'm going to be providing a
9 brief walkthrough of the contents of the staff draft
10 2012-2013 Investment Plan.

11 This is a brief look at our schedule for the
12 Investment Plan. We posted the staff draft on January
13 27th. This is our first Advisory Committee meeting
14 today. We are targeting April 6th as our goal for
15 posting a revised Draft Investment Plan and that would
16 feed into a second Advisory Committee meeting that we're
17 looking at scheduling on or about April 20th. So we
18 certainly would appreciate any early feedback about
19 whether that date is workable for our Advisory Committee
20 members.

21 Our target is to adopt the Investment Plan by
22 -- at a May 9th Commission Business Meeting. Statutes
23 require us to have a finalized Investment Plan in time
24 for the Governor's May revise, and May 9th is the closest
25 available Business Meeting date.

1 I'll say a little bit about the role and
2 purpose of the Investment Plan. This is the --

3 MR. SCHLAGETER: Can I just ask a question
4 about --

5 MR. SMITH: Certainly.

6 MR. SCHLAGETER: -- the schedule for a second?
7 Is there, then, a deadline for written comments?

8 MR. SMITH: There is a deadline for written
9 comments, but, well, it's not a firm deadline, but
10 obviously we need time to incorporate all written
11 comments. Any written comments in response to this
12 meeting, I would hope that we could have submitted to us
13 within perhaps two weeks, so towards the end of this
14 month. But our public docket will remain open up to and
15 perhaps a little bit after the Investment Plan is
16 adopted. You're welcome.

17 This is the first draft of the Fourth
18 Investment Plan covering Fiscal Year 2012-2013. It will
19 form the basis for the Fiscal Year 2012-2013
20 solicitations, agreements, and other funding
21 opportunities. We estimate that we will have \$100
22 million available for a portfolio of fuels, technologies
23 and supporting elements. This Investment Plan is a bit
24 different from previous years; this is the first
25 Investment Plan to constitute an update in line with AB

1 1314, Wieckowski Bill of 2011. As such, it relies on the
2 more comprehensive analyses from previous Investment
3 Plans, in particular the 2011-2012 Investment Plan, which
4 was adopted last September, so fairly recently. This
5 document is a shorter, more concise allocation of funding
6 compared to previous Investment Plans, and it relies on
7 those analyses and also tries to take into account any
8 new developments.

9 The layout of this Investment Plan is also a
10 bit different from previous years. We have organized it
11 to reflect the overall supply chain of alternative fuels
12 and vehicles, rather than individual pathways. If people
13 are interested in delving deeper into the pathways of
14 those alternative fuels, again, I would encourage you to
15 look back at the 2011-2012 Investment Plan. This
16 Investment Plan focuses more on specific areas of
17 recognized needs.

18 Several of our funding allocations remain
19 tentative, this is just the first draft; really, all of
20 our funding allocations are still subject to everyone's
21 further input and review before the Investment Plan is
22 finalized, but there are specific allocations that we
23 knew that we needed further input and discussion about
24 their need and appropriateness. The amounts that are
25 listed in the funding summary tables are meant as

1 possible benchmarks for funding and, just so that
2 everyone understands, not all of the amounts listed as
3 tentative in the Investment Plan can be fully funded
4 because they would total up to something along the line
5 of \$109 million and we, again, estimate \$100 million in
6 available funding.

7 Moving now into the funding contents of the
8 Investment Plan, the first section is on Biofuel
9 Production and Supply. Our efforts here combined
10 previously separate allocations for three types of
11 biofuels and fuel substitutes, so those would be diesel
12 substitutes, gasoline substitutes, and biomethane. By
13 combining these rather than having specific allocations
14 for each one, we hope that we can fund the best projects,
15 not just the best projects of a particular fuel type. We
16 will continue to emphasize low carbon and waste-based
17 feedstocks, and we have a particular interest in fuels
18 that can utilize existing infrastructure and vehicle
19 stocks.

20 The allocation for this category is \$20
21 million, and this is similar to a previous year's
22 combined funding levels if you had to combine the funding
23 for those three types of fuel production. One option
24 available to us would be to backfill the solicitation
25 that is currently out on the streets, PON-11-601, which

1 included the option to add \$30 million to the available
2 funding amount, in addition to the previous year's
3 funding. But we want everyone to understand that this
4 backfilling of funding will not be committed until the
5 2012-2013 Investment Plan is approved and, of course,
6 until the new Fiscal Year beginning July 1st.

7 In addition to production capacity, we're also
8 interested in ideas to support the demand for these
9 fuels. So far, we had reasonable success in promoting
10 the co-location of biofuel production demand,
11 specifically for biomethane. Blending requirements,
12 obviously there's a certain amount of ethanol that is
13 required to be blended into California gasoline, so that
14 works into our favor of producing lower carbon ethanol.
15 Hopefully the impact of the Low Carbon Fuel Standard,
16 once all legal issues are resolved, the RFS-2, other
17 policies and regulations will further encourage not just
18 the production, but the demand for biofuels and other
19 liquid fuels that can displace gasoline and diesel.

20 Federal Tax Credit changes, a couple of
21 important Biofuel Production Tax Credit changes occurred
22 towards the end of last year that might negatively impact
23 the demand for these fuels, and then we're also
24 interested in discussing any possible new programs to
25 provide long term price visibility to biofuel producers

1 so that they can feel more confident in producing
2 additional biofuels and getting additional capital.

3 For PEV Charging Infrastructure, we have
4 allocated \$7.5 million --

5 MR. MUI: Before you head on, Charles, this is
6 Simon Mui with NRDC, I just wanted to ask a couple
7 questions on the biofuels side.

8 MR. SMITH: Sure.

9 MR. MUI: In terms of the change in sort of
10 allocation and funding the best projects, could you give
11 a little bit more clarity about what constitutes the
12 best, is this looking at sort of financial viability, or
13 is it looking at environmental standpoint? One of the
14 things I want to try to understand is how does that
15 impact sort of the applications in terms of certainty for
16 certain fuel categories? Or how will that broadening of
17 that sort of criteria -- or will the criteria be clear
18 enough that potential applicants know what to perform to?

19 MR. SMITH: The -- what constitutes the sort of
20 best projects is built into our solicitations. We judge
21 each application on a range of criteria that are publicly
22 released when a solicitation is released, so those range
23 everything from project financing, potential for market
24 transformation, use of low carbon sustainable feedstocks,
25 the resulting fuels, lifecycle, GHG emissions, the

1 projects teams' qualifications, and so forth. But,
2 again, that is sort of developed specifically for each
3 solicitation. The Biofuels solicitation that we have on
4 the street right now will probably be a good indicator of
5 the kinds of things we look for, and everything that I
6 mentioned is reflected in that.

7 MR. CACKETTE: Charles, I had a question about
8 -- that was triggered by the first sub bullet on this --
9 it says "Fund the best projects regardless of fuel type."

10 MR. SMITH: Uh huh.

11 MR. CACKETTE: And what I was wondering is how
12 are you taking into consideration the sort of long term
13 needs of meeting climate change goals? And the example
14 would be we've looked at, you know, light-duty vehicles
15 fairly carefully, so gasoline substitutes, and find that,
16 you know, electricity and hydrogen could serve the need
17 of meeting the long term goals; but when you switch over
18 to the sort of diesel side, you know, ships, trains,
19 planes and trucks, that that same assessment has not be
20 done. And it seems to me like the statement that we're
21 going to fund like gasoline substitutes, for example, if
22 we have alternatives to gasoline already available, where
23 on the diesel side we may not have alternatives to diesel
24 and jet fuel, for example, that there might be a policy
25 consideration of giving a preference to substitute fuels

1 for the diesel side more than gasoline. This is
2 hypothetical at the moment, but the question is how are
3 we -- are we considering that at all? Or are we really
4 just saying, fine, if we spend all of our money on
5 gasoline substitutes that would be fine?

6 MR. SMITH: I think I understand your question.
7 So as I understand it, will we be able to prioritize fuel
8 types that might be able to displace fuels that would be
9 harder to displace by other technologies? That is
10 something that we can certainly consider. One of the --
11 and that certainly, I would imagine, go in the favor of
12 diesel substitutes in biomethane rather than gasoline
13 substitutes, but of course we're also interested in the
14 portion of gasoline displacement that won't be met, even
15 as electric vehicles and fuel cell vehicles accelerate
16 quickly into the market. There will still be a large
17 market for gasoline and so there's still a lot of value
18 to gasoline substitutes. But I take your recommendation
19 that we consider something like that, as well.

20 MR. MCKINNEY: And let me -- Jim McKinney here
21 -- if I can add to what Charles is saying a little bit,
22 it's an important question, Tom. One thing that we've
23 found in the first funding cycle was that the biogas
24 projects were very competitive; those are -- I think we
25 have four commercial-scale projects that we funded in

1 that arena; the other ones were primarily feasibility or
2 pilot studies. So we're balancing -- I think your good
3 comment and observation -- the long term needs and
4 strategies vs. some of the short term needs and market
5 opportunities. The equation on biogas is changing right
6 now because of natural gas prices, that decline, so
7 that's a challenge. Our long term strategy is that
8 biogas, when we can get the fuel quality issues
9 straightened out, that there is a pathway, an
10 infrastructure and vehicles that can use biogas
11 ultimately for the truck sector.

12 MR. SMITHLINE: Hi. Scott Smithline with
13 CalRecycle. I just wanted to take a minute and share our
14 perspective on the change from last year's plan and this
15 year's plan and the removal of the line item for the pre-
16 landfill biomethane. Commissioner Peterman, I know you
17 are in receipt, and I apologize, I was asked to come to
18 this meeting a little late and I just didn't have an
19 opportunity to review that the other Commissioners and
20 Commissioner Weisenmiller were not cc'd on this letter,
21 so I apologize for that, and I don't know if you're in
22 receipt of a copy of it, Commissioner. But we have a new
23 mandate at CalRecycle last year (when) AB 341 was signed,
24 and we were responsible for coming up with a plan to
25 divert 75 percent of all waste from the landfills by

1 2020. Anywhere else that this has been done in the
2 world, it has been done with a massive diversion of
3 organics from the landfill, there's just no way to
4 achieve 75 percent without diverting like 10 million tons
5 of organics from the landfill, basically. So, to do
6 that, we are going to have to develop the types of
7 infrastructures that these other countries have developed
8 to achieve this goal. Those infrastructures include
9 significant organics processing and composting, as well
10 as anaerobic digestion facilities outside the landfills.
11 And so we think that it's appropriate to send the message
12 to this industry that there is going to be a consistent
13 long term funding effort to help develop pre-landfill
14 biomethane industry in the State of California. Not only
15 is it consistent with our mandate under this new law,
16 it's consistent with our own department mandate which is
17 to divert 50 percent of organics from landfills by 2020.
18 And additionally, it is an environmentally superior fuel.
19 The option to -- we have a tremendous amount of waste in
20 place in the landfills in California and I believe we
21 ought to tap that the best we can to recover that energy
22 that's in there. But the proposition of getting energy
23 from waste in the landfill, organic waste in the
24 landfill, the proposition is you can get maybe 20 or 25
25 percent of the total available energy over about 100

1 years. If you divert that organic material from the
2 landfill to a standalone anaerobic digestion facility,
3 you can basically get 100 percent of the energy in about
4 30 days. So there's no question that, from an
5 environmental perspective, pre-treating this and taking
6 the pre-landfill biomethane is going to be superior from
7 an energy conservation, resource conservation, and
8 environmental perspective. So we would ask that you
9 consider reinserting some minimum funding so we can
10 communicate to the industry that this is the direction we
11 need to go. So, thank you.

12 MR. SMITH: Thank you, Scott. So we'll -- I'm
13 certain we'll come back to that when we open up the
14 discussion for everything that we have here.

15 MR. SMITHLINE: My apologies, I thought the
16 discussion was open.

17 MR. SMITH: Oh, well, we would be happy to take
18 clarifying questions on the slides, but, yeah, we will
19 come back for deeper discussions on all of these issues,
20 I'm sure.

21 Now moving into Fueling Infrastructure, the
22 first category that we come to is Plug-In Electric
23 Vehicle, or PEV Charging Infrastructure. We have \$7.5
24 million allocated for this activity, which is similar to
25 previous years' funding levels. We believe that PEVs may

1 be approaching a critical juncture where PEVs go from
2 early adopters to the next generation of adopters. PEVs
3 are expected to double from their current numbers by 2013
4 and then are projected to be in the hundreds of thousands
5 by 2020. At-home, overnight charging remains our first
6 priority, of course. We have funded companies to provide
7 at-home charging infrastructure using previous Investment
8 Plans' dollars. We see a growing interest, as well, in
9 workplace and fleet charging. We've also seen a couple
10 of early projects that will help assess the need for
11 additional funding of other types of charging
12 infrastructure, such as pilot projects in the Bay Area to
13 study how charging could work in multi-unit dwelling
14 settings since a lot of Californians, especially a lot of
15 Californians in early adoption areas, live in places
16 without private garages.

17 There have also been a few fast charging
18 installations in the San Francisco Bay Area and San Diego
19 Area, and we will be looking for feedback on the need and
20 appropriateness of funding for those kinds of
21 installations, as well. Additionally, while we had a
22 very large deployment of public charger installations
23 from previous years, something along the lines of, I
24 think, 3,200 or so, there are still some areas of the
25 state that really have not had these kinds of public

1 charger installations, often in the areas with greatest
2 air pollution, especially the San Joaquin Valley, for
3 example.

4 Moving now to hydrogen fueling infrastructure,
5 we have \$11 million allocated for this Investment Plan.
6 We, along with other stakeholders, anticipate a rapid
7 growth in fuel cell vehicles up through the 2015 to 2017
8 timeframe. Surveys of automakers indicate that this
9 number could be above 50,000 vehicles at the end of the
10 timeframe. But in order for those vehicles to be
11 deployed, stations have to be paired where those vehicles
12 are expected to go. This \$11 million allocation will
13 help us reach anticipated needs range of 38 to 50
14 hydrogen stations in key locations around the state in
15 time for the commercial launch in 2015. So, a bit of
16 quick tallying, there were six previously existing
17 publicly available hydrogen fueling stations, five
18 recently funded by ARB, eight funded under the Energy
19 Commission's first Hydrogen PON, as well as based on
20 analysis of the last PON, we might add another 12 to 18
21 new stations, given the \$18.7 million that was released
22 in the hydrogen infrastructure solicitation yesterday.
23 The total comes to 31 to 37 stations, slightly short of
24 the anticipated needs range of 38 to 50, so this \$11
25 million allocation will help us go towards closing that

1 gap.

2 As in previous years, we remain open to multi-
3 use stations, so perhaps stations that are paired with
4 fuel cell bus fueling infrastructure, or warehouse
5 forklift fueling infrastructure, but we still expect that
6 these stations have a public fueling option.

7 Looking beyond 2015 to 2017, of course, we have
8 the Clean Fuels Outlet Regulation under the Air Resources
9 Board, as well as ongoing multi-stakeholder discussions
10 about how we can ensure that continuation and expansion
11 of hydrogen stations.

12 Moving now to E85 fueling infrastructure, we
13 have a tentative allocation of up to \$2.5 million. We've
14 seen a gradual rise in the number of E85 stations, Flex
15 Fuel Vehicles, and E85 sales over the past few years;
16 however, on average, E85 remained five to 20 percent more
17 expensive than gasoline when you look at it on an energy
18 equivalent basis. Additionally, there was the end of the
19 38 cent per gallon Federal tax credit for blending
20 Ethanol in 2012 -- beginning in 2012 -- as well as the
21 current uncertainty of benefitting from LCFS credits,
22 both with regard to the legal issue, as well as the
23 relatively modest GHG emission reduction from most in-
24 state E85 sales since they come primarily from corn
25 feedstocks.

1 When we look at the stations that have been
2 funded so far, we see a relatively slow build-out, so
3 there are still quite a few stations on their way plus,
4 in our Alternative Fuels Infrastructure that Jim McKinney
5 mentioned, we have an additional \$10.1 million committed
6 to E85 station installations. So with all this in mind,
7 we're reviewing and seeking input on further funding for
8 E85 stations for this 2012-2013 Investment Plan.

9 Moving now to --

10 COMMISSIONER PETERMAN: A question.

11 MR. CACKETTE: I was just curious on that
12 statement, this sort of sounds pretty negative and Jim, I
13 think, mentioned early that there was some very
14 innovative business plans for like some of the existing
15 station purveyors, or fuel purveyors. So can you explain
16 what the difference is there?

17 MR. SMITH: Jim, do you want to discuss the
18 financing? Or do you want me to discuss the --

19 MR. MCKINNEY: Sure, go for it, Charles.

20 MR. SMITH: Okay. Well, again, we do see at a
21 high level a lot of reasons to be concerned given the
22 ongoing price differential, as well as the end of the tax
23 credit; I haven't seen yet how that impacts the price to
24 the consumer, we could assume that it will have a
25 negative impact. But we haven't had a chance to see any

1 empirical data on that yet. But I am also aware that
2 several of the E85 fueling companies are revisiting and
3 revising how they approach financing for these stations.
4 I don't have a lot of detail on it, however.

5 MR. MCKINNEY: Yeah, and then, Tom, Matt Horton
6 from Propel is here and I think will speak later in the
7 program to talk more about their business model. But I
8 guess from our perspective at staff, there's been some
9 general challenges for the E85 retail sector. There is
10 not quite the buzz on FFVs that we're getting on Electric
11 Vehicles and Fuel Cell Vehicles, and so it's been a
12 challenge for this market sector. But, again, we're
13 impressed with what Propel is doing to kind of work
14 through those challenges and, again, Mr. Horton can talk
15 to that.

16 MR. SMITH: So moving to Natural Gas Fueling
17 Infrastructure, we have a tentative allocation here, as
18 well, up to \$2.5 million. To date, \$5.1 million in AB
19 118 funding has gone for the installation or upgrading of
20 20 stations, primarily CNG, but a few also offer LNG. An
21 additional \$9.6 million is currently available in the --
22 I shouldn't say "upcoming" -- in the current solicitation
23 for Alternative Fuels Infrastructure.

24 We have seen a slow but steady installation of
25 previously funded stations funded the Energy Commission.

1 We have also heard from several stakeholders that
2 emphasize the need for further focus on the increasing
3 vehicle deployment, not just expanding infrastructure,
4 and that is something that we are trying to address
5 through our Natural Gas Vehicle Buy-Down Program.

6 Moving to Propane Fueling Infrastructure, we
7 have a tentative allocation of up to \$1 million, this is
8 a relatively low-cost alternative fuel option, certainly
9 in terms of installation, to install propane fueling
10 infrastructure at a site that already sells propane for
11 other purposes, can be anywhere from \$50,000 to \$100,000,
12 perhaps. The previous Investment Plan allocated a half
13 million towards expanding propane infrastructure with a
14 special emphasis on school fleets in rural Northern
15 California. And with that hopefully covered by our
16 current solicitation for fueling infrastructure, we are
17 curious on any feedback whether there is anticipated need
18 for additional funding for propane fueling
19 infrastructure.

20 So from fuel production to fuel infrastructure,
21 now to the vehicles, specifically Natural Gas Vehicles,
22 we have allocated \$12 million toward the deployment of
23 natural gas vehicles. We have seen an ongoing interest
24 through our Vehicle Buy-Down Program. The first round of
25 funding provided \$14.8 million towards 769 vehicles and

1 primarily within that number of vehicles towards medium-
2 and heavy-duty trucks. The reservations went quickly, it
3 certainly - our previous allocation would not have been
4 enough to supply annual demand for these vehicles. The
5 claims for the reservations continue to be filed, so the
6 money is going out the door. Our second round of funding
7 for the Vehicle Buy-Down Program using previous years'
8 funding provides \$6.4 million for natural gas vehicles,
9 and the second round can also be increased to add a total
10 of \$30 million for the Vehicle Buy-Down Program. This
11 \$30 million, though, covers any additional funding that
12 we would want to add to both natural gas vehicles, as
13 well as propane vehicles. We have -- we are continually
14 interested in how we can improve the buy-down program, we
15 want to ensure that our incentive isn't too small to be
16 effective, but also isn't too large to be inefficient.
17 We also want to make sure that we are covering the proper
18 vehicle types. We've heard occasional discussion about
19 options for cost-efficient retrofitting, or repowering of
20 vehicles to utilize natural gas systems, and so that is
21 something that we are interested in feedback, as well.

22 MR. CARMICHAEL: Charles?

23 MR. SMITH: Yes.

24 MR. CARMICHAEL: Just a bit of a disconnect
25 here, or incomplete picture shown with this slide, if you

1 look at the summary table of funding to date, it shows
2 \$29.3 plus \$6.3 --

3 MR. SMITH: Right. So the \$29.3 reflects
4 natural gas vehicle deployment projects that were
5 separate from the buy-down program. I think we had two
6 come in when we were doing ARRA cost-sharing that were
7 for natural gas vehicle deployments, so that should be
8 where the difference lies.

9 MR. CARMICHAEL: Thank you.

10 MR. SMITH: Uh huh. Moving to Propane
11 Vehicles, we have a tentative allocation of up to \$2.4
12 million. The experience here has been similar to natural
13 gas vehicles and our Vehicle Buy-Down Program, we've seen
14 that the reservations haven't gone as quickly for propane
15 vehicles as they have for natural gas vehicles, and so we
16 would be interested in getting additional feedback from
17 the Advisory Committee, from the public, on how we can,
18 again, improve the Buy-Down Program as need be, how we
19 can expand propane vehicles market potential, and if
20 there are ways to encourage greater GHG emission
21 reductions from propane vehicles.

22 Moving now to Light-Duty Plug-In Electric
23 Vehicles, for deployment purposes we have a tentative
24 allocation of up to \$5 million towards this activity.
25 Our primary goals are to encourage early consumer

1 familiarity, an increase in Plug-In Electric Vehicle
2 production volumes so as to get the next generation of
3 adopters beyond the early adopters interested in these
4 vehicles. Funding for light-duty plug-in electric
5 vehicles has so far been primarily provided by the ARB's
6 Clean Vehicle Rebate Program, which has provided \$16
7 million toward more than 4,800 vehicles, thus far. PEV
8 offerings, however, are expected to grow. I believe the
9 Chevy Volt will become eligible for a CVRP incentive, as
10 well as other offerings perhaps by Ford and Toyota. And
11 so there is a definite possibility that CVRP funding may
12 be - may run out before summer of this year because on
13 possible PEV deployment.

14 The ARB has halved its per vehicle incentive
15 level in order to address this limited funding, and is
16 continuing to explore more appropriate incentive levels
17 for the different kinds of vehicles. Additional funding
18 from the Air Quality Improvement Program's 2012-2013
19 funding plan might still be insufficient once it's
20 adopted for the coming fiscal year, and this will be the
21 subject of future AQIP Working Group meetings at the ARB,
22 but the Energy Commission is interested in working with
23 the ARB to find a way to make sure that a reasonable
24 incentive for these vehicles can continue.

25 MS. TUTT: Eileen Tutt, California Electric

1 Transportation Coalition. Just a clarification. Is this
2 \$5 million in addition to what is already allocated on
3 the CVRP side, like we did last year when we moved a
4 million over? Or is it something different? Is this
5 movement from the infrastructure side into the vehicles
6 side? Is that what this is?

7 MR. SMITH: So this funding is separate from
8 the Electric Charging Infrastructure funding, if that's
9 what you mean.

10 MS. TUTT: Okay, so this is part of the CVRP
11 money, this is not infrastructure money?

12 MR. SMITH: This is not infrastructure money --

13 MS. TUTT: This is Air Board -- this is run by
14 the Air Board, the \$5 million?

15 MR. CACKETTE: I think what it is, last year
16 the CEC took some money and sent it over to us to expand
17 that, I think this is the same thing, right, possibly
18 doing it again?

19 MR. PEREZ: Correct, Tom.

20 MS. TUTT: But over double - instead of \$2, it
21 is \$5 million, got it. Thank you.

22 MR. SMITH: Moving now toward medium- and
23 heavy-duty Advanced Technology Vehicles, focusing first
24 on Demonstration. We have a tentative allocation of up
25 to \$3 million for this category. A brief recap of some

1 of the work the Energy Commission has already done in
2 this regard, we have PIER funded work at the CalHEAT
3 Research Center; in addition to that, we have eight
4 projects that the Energy Commission has funded from our
5 first solicitation that focused on medium- and heavy-duty
6 Advanced Technology Vehicles, and that covers a variety
7 of different technologies ranging from hybrid hydraulics
8 to hybrid electrics to different turbine developments,
9 etc. Additional projects will follow from the second
10 solicitation, which Jim mentioned for, I believe, \$16.9
11 million. The Notice of Proposed Award for that should be
12 released soon.

13 MR. PEREZ: Hey, Charles, can I jump in right
14 now? I just want to inform everybody this is pretty
15 exciting breaking news, it doesn't elevate to a CNN news
16 alert, but 15 minutes ago we did post the Notice of
17 Proposed Awards for the medium- and heavy-duty
18 solicitation. I know many in the audience have been
19 waiting for several months for that, it is out; it will
20 hit the list server hopefully within the next 10 to 15
21 minutes, so thank you Grants Office.

22 MR. SMITH: Thank you, Pat. So the previously
23 funded projects by the AB 118 program are still in fairly
24 early phases and we don't have a firm measurement of
25 their successful commercialization yet -- I want to

1 stress "yet" because we do expect great things from these
2 funded projects. However, for the purpose of the 2012-
3 2013 Investment Plan, we seek public and Advisory
4 Committee input on the need and appropriateness for
5 additional funding for these types of projects for the
6 coming fiscal year. Looking at the same type --

7 MS. HOLMES-GEN: Thanks. Bonnie Holmes-Gen,
8 American Lung Association, California. I'm sorry if I
9 missed it, but what types of vehicles would fall in the
10 category of the projects that you would fund in heavy-
11 duty all electric vehicles? And how much of this would
12 fall in the category of zero emission goods movement?

13 MR. SMITH: So for the purpose of this slide,
14 which focuses on demonstration projects, all electric
15 trucks are certainly eligible as one type of project, we
16 don't have a specific allocation within this amount for
17 electric trucks, but they have submitted applications, I
18 believe we have a few funded projects. I haven't had a
19 chance to look at the Notice of Proposed Award yet, but
20 we may have more. And that actually segues nicely into
21 the next slide which focuses on deployment.

22 We have a tentative allocation of up to \$4
23 million that could support the deployment of advanced
24 technology vehicles in the heavy-duty sector. So, so
25 far, we've seen a steady increase in the interest and

1 deployment of medium- and heavy-duty hybrid electric,
2 hybrid hydraulic, and all electric vehicles. The Air
3 Resources Board through its Hybrid Truck and Bus Voucher
4 Incentive Project, or HVIP, provides deployment
5 incentives for these kinds of vehicles administered
6 through CALSTART. The incentive so far has been
7 sufficient to fund different kinds of hybrid trucks;
8 however, the highest incentive available has generally
9 been insufficient to significantly defray the higher
10 incremental cost of all-electric trucks.

11 Previously, the Energy Commission provided \$4
12 million to increase the incentives for 155 all-electric
13 trucks and, at this point, with ongoing interest and with
14 a lot of the stakeholder input that we have been hearing,
15 we're interested in receiving feedback on whether and how
16 to continue support specifically for medium- and heavy-
17 duty all-electric trucks.

18 Moving out of vehicles now into emerging
19 opportunities, we've allocated \$1.5 million for this
20 activity, which has been reserved as in previous years
21 for previously unanticipated opportunities, however, it's
22 difficult to develop competitive solicitations for these
23 kinds of projects, as I believe Pat Perez will tell us a
24 bit about later on, but briefly, these opportunities are
25 tough to foresee, they're often time constrained, and

1 they can be quite unique and difficult to compare towards
2 other projects that might apply for the same funding.

3 MR. PEREZ: Yeah, with that -- this is Pat
4 Perez, California Energy Commission -- and one of the
5 reasons for establishing this category is we wanted to
6 maintain flexibility to capture, you know, late or recent
7 developments out there that would assist us in terms of
8 achieving our overall goals, which is to advance the
9 deployment of innovative technologies, to assist us in
10 transforming the vehicle market here in California, as
11 well as achieving our greenhouse gas emissions
12 objectives.

13 And in the legislation that guides us, AB 118,
14 as well as the amendments and changes that have been made
15 to that, it has provided the Energy Commission with
16 additional flexibility with respect to how to foster,
17 capture, nurture, and consider some of the innovative
18 technologies that many of you are working on that don't
19 fit nicely into the funding categories we have. As many
20 of you recall in discussions we had in the previous
21 Investment Plans, you wanted to maintain some of this
22 flexibility. We heard from a number of speakers that
23 their particular projects did not fit in nicely with some
24 of these funding categories.

25 So we've taken that input into consideration

1 and we are looking at a number of options on, you know,
2 looking at existing grant programs here at the Commission
3 and how we could make adjustments and changes to focus on
4 more advanced research and development and near
5 commercial activities here, and develop more incentive
6 programs that could be administered by public entities,
7 or not-for-profit entities, so some of the flexibility
8 that was provided to us under -- I think it was Assembly
9 Bill 1314 by Wieckowski.

10 So, as many of you know that have reviewed our
11 statutes, the Energy Commission can make single source or
12 sole source awards for applied research in these types of
13 activities, and one of the things that we would like to
14 ask of this Advisory Committee, as well as our valued
15 stakeholders that are out in the audience today, is to
16 assist us as we move forward with not only this
17 Investment Plan that is before you today, which is the
18 '12-'13 Investment Plan, but future plans, to help us
19 design that structure, set up the criteria and the
20 process for evaluating many of these proposals that are
21 difficult to review under our current structure with
22 respect to making awards for either single source or sole
23 source awards.

24 And so I know there's many people here today
25 that are going to be sharing with us under public

1 comments some of their suggestions and exciting
2 proposals, and we want to be able to consider those as we
3 move forward. And we'll be looking for input from you as
4 to what type of proposals do you think we ought to
5 consider, share with us some of the criteria and factors
6 that perhaps we might consider for screening proposals,
7 as well as assist us in developing the process and
8 procedures for developing and accepting and considering
9 proposals.

10 I know that's a lot to ask today from you and I
11 realize that you probably can't provide much input in
12 that area, but over the next two weeks, we would really
13 welcome your written input and ideas as we move forward
14 on this funding category, which right now we have \$1.5
15 million recommended for the next year. But what we're
16 trying to do is maintain flexibility, capture emerging
17 opportunities that perhaps a lot of people aren't even
18 thinking about at the grander scale, and tap into perhaps
19 some of these garage ideas that are evolving out there.
20 So I just wanted to provide some context and welcome your
21 input and ideas as we move forward. So, thanks, Charles
22 for letting me jump in.

23 MR. SMITH: Oh, John Shears.

24 MR. SHEARS: John Shears with CEERT, Center for
25 Energy Efficiency and Renewable Technologies. Since this

1 was really, I think, the main advocate for this, that we
2 all supported, was Tom Fulks, who -- so I'd like to make
3 a motion that we call this the Tom Fulks clause -- maybe
4 we should call Tom and Tom can help us figure it out.

5 MR. PEREZ: We welcome his input.

6 MR. SHEARS: So, Tom, if you're out there,
7 you're on the hook.

8 MR. SMITH: Thank you both. Moving from
9 Emerging Opportunities to Manufacturing, we have \$20
10 million allocated towards this activity in the Draft
11 Investment Plan. This is a significant funding amount
12 increase over previous years; it reflects the unmet
13 demand that we've seen in a lot of our previous
14 solicitations, as well as discussions with California
15 companies, as well as our interest in emphasizing in-
16 state economic development as we try to turn the corner
17 on the recession.

18 The manufacturing solicitation that's currently
19 on the street right now, PON-11-604, was written to allow
20 for a funding supplement of up to \$35 million, so at the
21 Energy Commission's discretion, some or all of the '12-
22 '13 funding could go towards projects that scored well in
23 the solicitation, but we were not able to fund due to
24 insufficient funding. That funding could not take place,
25 of course, until the start of the new Fiscal Year, but it

1 would represent an opportunity to quickly release funds
2 for the solicitation's highest quality projects.

3 Moving on --

4 MR. SHEARS: Charles, just quickly, so \$20
5 million is allocated --

6 MR. SMITH: Yes.

7 MR. SHEARS: -- but in the covenants for 11-
8 604, it allows for backfilling up to \$35 million, so
9 where does the \$15 million coming in?

10 MR. SMITH: Right, so as I recall, the
11 manufacturing solicitation as currently released has \$10
12 million immediately available. Based on the number of
13 projects and the positive of scores of those projects, I
14 would certainly expect that we will end up with more
15 worthwhile projects than we have funding for in that \$10
16 million. This \$20 million is separate from that, but at
17 the Energy Commission's discretion, it could go toward
18 backfilling some of those worthwhile projects from the
19 solicitation. The solicitation was written to allow up
20 to \$35 million, not just \$20 million, but up to \$35
21 million so that we would have more flexibility in
22 determining our manufacturing and funding allocation for
23 this Investment Plan.

24 MR. SHEARS: So we're still looking for \$5
25 million there if there's \$10 million -- yeah, just so

1 everyone as we're tracking the numbers.

2 MR. PEREZ: Yeah. Let me just add a little bit
3 to that significant head room that we have provided. One
4 of the things that we heard loud and clear from many of
5 the stakeholders and the public, other government
6 entities, and all, is the urgency to create and retain
7 jobs in California, and we felt that this is a
8 solicitation that accomplishes that goal in terms of
9 creating more green technology jobs and facilitates that
10 with an urgency where our economy is today, also. We
11 want to provide that broad spectrum of head room;
12 however, it's up to this Advisory Committee to provide
13 guidance as to whether or not you think that's a worthy
14 objective in terms of putting more money into that
15 effort. So that was pretty much the rationale for
16 creating that head room, it's not a commitment, but we
17 wanted to at least provide a wide range of opportunities
18 and choices here with this head room.

19 MR. SMITH: Now on to Work Force Training and
20 Development, we have \$2.5 million allocated in the Draft
21 Investment Plan. We have ongoing partnerships with EDD
22 and ETP, and of the \$2.5 million, we were anticipating \$2
23 million going for continued workforce training delivery
24 via ETP, and this is based on their estimate of upcoming
25 demand for the dollars as specifically applies to clean

1 transportation industry, a quarter of a million for
2 workforce needs assessment of the clean transportation
3 industry, and a quarter of a million dollars is needed to
4 expand a pilot project that would develop career paths
5 for new entrants to the clean transportation industry.

6 The final category, Market and Program
7 Development, has a couple of sub items that I'll run
8 through very quickly. Sustainability Studies, a
9 tentative allocation of up to \$1 million, this could fund
10 the continuation and expansion of studies to ensure
11 sustainable approaches to in-state biofuel production,
12 other issues perhaps identified by the LCFS
13 Sustainability Working Group and Interagency Forestry
14 Working Group. Regional Alternative Fuel Readiness and
15 Planning, we've allocated \$3 million, this was received
16 very favorably at several levels when we applied it to
17 our Plug-In Electric Vehicle Regional Readiness Plans.
18 It's possible that we could expand this to include
19 hydrogen fuel cell vehicles, as well as natural gas,
20 perhaps even more specifically natural gas trucks if
21 there are specific regions or corridors that natural gas
22 trucks are going to be emphasizing.

23 We have a tentative allocation for up to \$3
24 million for Centers for Alternative Fuels and Advanced
25 Vehicle Technology; this is a new category that we wanted

1 the public and Advisory Committee feedback on. We've
2 heard interest from a variety of stakeholders. It could
3 serve a number of possibilities including vertical
4 integration of research development, demonstration and
5 deployment processes. It could also serve as an
6 opportunity for collaborative hubs that promote industry
7 innovation, that speak as one voice in seeking venture
8 capital or Federal cost-sharing, a geographic facility to
9 demonstrate new technologies, and to provide workforce
10 training.

11 We have ongoing need for technological market
12 and financing analysis, so we have allocated \$2 million
13 toward technical assistance and analysis that supports
14 the program, as well as a half million dollars that
15 supports measurement verification and evaluation efforts.
16 This will help provide accountability both for individual
17 projects that we have funded, as well as the ARFVT
18 Program as a whole, and it will also feed into future
19 Benefits Reports.

20 So this last slide is a summary of the funding
21 allocations contained in the Investment Plan, organized
22 by Fuel and Vehicle Supply Chain Phase, as well as other
23 categories. And that concludes my presentation.

24 MR. PEREZ: Okay, with that, we would like to
25 open it up to questions from the Advisory Committee.

1 COMMISSIONER PETERMAN: And comments.

2 MR. PEREZ: And comments, thanks.

3 MR. SHEARS: I guess I'll start. So first
4 thing, just a little bit of housekeeping in terms of the
5 staff Draft Benefits Report and the numbers in there, and
6 also for Will Coleman on the phone, if you check the Lead
7 Commissioner's Report for the IEPR, there's a chapter in
8 there that talks about -- that is basically a
9 distillation of the Benefits Report. There are updated
10 numbers based on the feedback from the December workshop
11 and comments submitted. So the numbers just need to be
12 trued up in this Investment Plan to match up with the
13 numbers in the IEPR chapter, which I still think are more
14 conservative than they need to be. Understanding, you
15 know, you want to be conservative, but I think even
16 realistically there's probably another 50-100 million
17 gallons of petroleum displacement that could have
18 reasonably been derived from the program benefits.

19 I'm also concerned, like Tom, about E85 and, I
20 agree, we should constantly be evaluating all of these
21 projects, but in terms of helping the Low Carbon Fuel
22 Standard goals work, which is part of the package that is
23 the State's suite of policies for alternative fuels, you
24 know, certainly it needs to be looked at and thought
25 about more creatively, but I think it's also an important

1 outlet for the state, through which the state can achieve
2 its policy goals.

3 On PEV charging, I'm sort of now in my thinking
4 about things and, you know, we're a participant in a
5 collaborative as are several other Advisory Committee
6 members, on a Plug-In Electric Vehicle Collaborative,
7 sort of looking to the horizon and thinking about looking
8 a little more mid-term in terms of what we need to be
9 doing with Federal incentive monies expiring in many
10 segments of the EV industry. And I see the work around,
11 you know, the money that's being teed up for this
12 Investment Plan and that work also leading to the initial
13 outline of the next Investment Plan as being iterative,
14 and I think it would be good to sort of have some
15 discussions with some of the PEV members about how to
16 work with the infrastructure funding strategically and
17 make sure that we're getting the right kinds of data back
18 and the right kinds of consumer user information back
19 about the stations because that's going to become more
20 and more critical to be able to inform the optimal
21 placement of future charging infrastructure, so if that
22 can be built in.

23 On the hydrogen fueling side, you know, we're a
24 member of this collaborative effort that is trying to
25 look at innovative ways of pulling together funding to

1 help expedite the infrastructure deployment for hydrogen.
2 I just want to highlight the numbers of stations that are
3 being discussed here in the Investment Plan and that are
4 referred to in the Fuel Cell Partnership's Action Plans
5 that get cited, those are really just for the three major
6 urban areas of Los Angeles, San Francisco, Sacramento, so
7 those station numbers are really a subset of what the
8 state will need overall, but everyone is focused on these
9 major metropolitan areas as the initial growth markets
10 for that technology. And I'll leave it to others to
11 maybe comment on the total number of stations that would
12 be required, recognizing that some of the stations that
13 have been talked about might actually be retired out by
14 the time the market actually starts entering its early
15 commercial phase in 2017.

16 Oh, and yes, on the workforce training, I'm in
17 support of that, I'm glad to see there's money for a
18 needs assessment, and I'm hoping that that needs
19 assessment is also looking at what's going to be
20 happening with the EV market and is thinking about
21 working with the industry stakeholders and the EV market
22 because, if the market does indeed take off, we'll need
23 to have a lot of in-state training to help support
24 infrastructure, you know, at the dealerships on the
25 vehicles, etc. And I'm also wondering if safety training

1 is envisioned as part of the workforce training around
2 EVs because I'm hoping that is encompassed within the
3 scope of the training that can be included in this,
4 because that's also, I think, a critical issue going
5 forward to build trust in the first and second responder
6 community and in the market overall. So that's just my
7 initial set of comments, to start.

8 MR. CACKETTE: A quick arithmetic one. You
9 said it added up to \$109 million, but you only have \$100
10 million, so somewhere in this you're going to try to pare
11 off \$9 million, right? So can we assume that that's
12 supposed to come from the "up to" categories vs. the
13 allocated categories? Or what is the meaning of the "up
14 to" vs. allocated ones? Where should we be focusing our
15 attention?

16 MR. PEREZ: Sure. One of the things, the fixed
17 amounts, again, are open to discussion, too, but we
18 wanted to really get greater input on these "up to"
19 categories, and we do not have strong recommendations on
20 the lower or the upper end, we're really looking for
21 advice from you and other members here as to do we go to
22 zero, or to the upper end of that range, so very
23 flexible. Oh, and part of the reason we did that is we
24 realized between the adoption of our last Investment Plan
25 that we only had a matter of a couple months to develop

1 this plan and did not have sufficient time to hold an
2 additional workshop, or release the draft in advance.
3 And so that's why we didn't really want to hardwire fixed
4 amounts in there and keep it open so that people like
5 yourself could have an opportunity to provide guidance
6 and more direction and rationale for why we should
7 increase it or decrease it. So that's what we were
8 attempting to do here.

9 MR. CACKETTE: Good. On the manufacturing one,
10 I think I understood what that \$20 vs. \$35 million was,
11 but if I understand it correctly, all you're saying is
12 that you may spend the \$20 million as allocated against
13 an existing PON that's already gone out, that is expected
14 to have more demand than supply of money from last year,
15 right? It's not to change the \$20 million for this year
16 to \$35 million?

17 MR. PEREZ: Correct.

18 MR. CACKETTE: To spend the \$20 on last year's
19 solicitation.

20 MR. PEREZ: It's a combination.

21 COMMISSIONER PETERMAN: Or just this year's
22 solicitation, I mean, this came out --

23 MR. CACKETTE: Yeah.

24 MR. MCKINNEY: And then also, Tom, on that
25 point -- Jim McKinney here -- what we found previously is

1 what we call "head room," if there is unallocated money
2 from previous fiscal years, so we can move that, we need
3 to notify the Legislature, but that's another reason for
4 having the very high head room amount on some of these
5 solicitations because we are always over-subscribed and
6 there are always projects that pass, but do not get
7 funded because it's very competitive.

8 MR. CACKETTE: And then, is this the time to
9 talk about the hydrogen O&M issue you brought up in the
10 introduction? Yes, okay. A couple things on the
11 hydrogen, then. The first one is a timing issue, you
12 know, as we've been working to lay out when the cars come
13 and when the stations to support those cars come, it
14 appears that if the \$11 million in this Investment Plan
15 was to be put out over a timeframe similar to the last
16 two Investment Plans, that it will come much too late.
17 So the question is, is it feasible and in your control to
18 have a PON that would go out within 2012, and not like a
19 year or more than a year later than when you actually
20 approve the Investment Plan? Because if it goes out in
21 2013, the stations won't be built in time to meet the
22 cars that are planned, and therefore the cars will have
23 to be delayed.

24 MR. MCKINNEY: Yes, it is possible. One of the
25 challenges now is getting our big grantees from the first

1 round to execute their agreements and actually begin
2 constructing stations. But, yes, staff can accelerate
3 the next PON for hydrogen.

4 MR. CACKETTE: And the second part of that is
5 that, you know, this whole effort to look at different
6 kinds of financing models for hydrogen stations so that
7 we can blend from -- or transition from a government
8 funded program to ultimately a sustainable industry
9 supported program -- it became very clear in that that
10 the O&M costs, the support for stations once they're
11 built, or some of the existing stations that have been
12 built or in the process of being built, they typically
13 only have a three-year lifetime of government funding,
14 and so these stations have the possibility to rebuild
15 them and then they go away just when they're needed. And
16 so supporting their operation until the volume of cars
17 gets enough to make this a profitable venture, which it
18 will, we think, after about four years, is kind of a key
19 issue. And I know we had a lot of discussions about it,
20 but can you shed any -- you brought it up earlier -- can
21 you shed any light about whether this money in this
22 Investment Plan will be able to be used to support some
23 of the stations that we've already built, that might
24 otherwise close down?

25 MR. MCKINNEY: I would say from staff

1 perspective, we are very open to that. As you know,
2 we're working with a lot of different parts -- your
3 program staff, as well as the Fuel Cell Partnership on
4 that question. We, for the hydrogen solicitation that
5 was just released, we did kind of a quick dive and
6 investigation to see if we could partially fund O&M in
7 the current solicitation; lining up the allowable cost
8 elements for O&M with what is allowed in the State
9 Contracting Manual is a challenge, it's not something
10 that we could figure out in one week, we're still working
11 on it, we're working with both the stakeholders and our
12 Counsel's Office on that to see if there's a remedy that
13 works. One of the challenges for us administratively is
14 that we would need to potentially extend the life of a
15 grant agreement. Traditionally in our program, we fund
16 up to the point of operation, or the end of construction,
17 we have a six-month period of operations -- for us, it's
18 just monitoring, you know, is the station performing? Is
19 the Grantee performing? O&M, by definition, goes out
20 well beyond that point of operation, so there's
21 flexibility there, but we really need a lot of input and,
22 again, good creative thinking.

23 COMMISSIONER PETERMAN: May I just interrupt
24 for a second, Tom, I don't know if that was the end of
25 your question about the hydrogen O&M, and although we

1 welcome all Advisory Committee members' thoughts on
2 everything, particularly some of the topics like hydrogen
3 O&M, which staff has raised as issues where they
4 specifically would like some feedback, I'd like to take
5 an opportunity to see if anyone else on the Advisory
6 Committee specifically wants to comment on that topic.
7 And we'll do that for some of the other ones, as well,
8 and we'll make sure to keep, as well, the order so that
9 we can go back and hear everyone's general comments. So,
10 if Tom does not have any other questions on that specific
11 question, I'd just like to open it up to the Advisory
12 Committee, any thoughts on hydrogen O&M and the program
13 supporting it?

14 MR. ECKERLE: Tyson Ecklerle with Energy
15 Independence Now. And as part of that group that Tom was
16 talking about, the Hydrogen Collaborative, we actually
17 ran a lot of the modeling for trying to develop a
18 business case, and it turns out there's kind of a turning
19 point, really, as hydrogen funding goes, so if you fund
20 the capital costs at the start, it might be a cheaper
21 option, but as the cars come out, the O&M actually
22 becomes a much cheaper option in the future, and so what
23 we are really interested in is spurring the movement
24 towards businesses taking over, and so this current model
25 with the Industrial Gas Suppliers kind of taking the

1 lead, I think they're reluctantly taking the lead from
2 what I've gathered and what they'd like to do is have
3 somebody like a fuel marketer come in and actually lead
4 the charge for developing the hydrogen infrastructure.
5 And so moving to this O&M type of model potentially opens
6 up that avenue. Again, we'd be happy to share the
7 modeling and all that kind of stuff.

8 MR. PEREZ: Great and we would really
9 appreciate additional feedback. This is an item that
10 emerged late in our process as we were developing the
11 solicitation and, of course, if you look at O&M cost,
12 it's a broad spectrum of factors that are considered,
13 including taxes and all of those -- we wrestle with the
14 property tax allocations, the co-location to other non-
15 related facilities, and we also realize there is some
16 sensitivity issues on private entities wanting to share
17 that information in a public setting, which is what we're
18 all about. And so we're kind of wrestling with those
19 issues.

20 And as Jim mentioned, one of the things we want
21 to do as part of the hydrogen solicitation, as we all
22 recognize, we need more information. There are legal
23 challenges here, operational, private sector protection
24 of confidential type information that they may not want
25 to share. And so we're going to keep this solicitation

1 rather flexible, I think we have language in there that
2 says that we are leaving it open for possible amendments
3 down the road as new information becomes available, so
4 that we can address this issue.

5 MS. TUTT: Eileen Tutt with the California
6 Electric Transportation Coalition. On this particular
7 issue, I don't think it necessarily is just a hydrogen
8 issue. Certainly, in the early BEV/Electric Vehicle
9 days, some of those stations were kind of -- they would
10 have been mothballed, but private entities stepped in and
11 did the O&M at significant expense for themselves, and
12 now it turns out that that's a really good thing because
13 all the wiring and everything is now ready for this next
14 generation of electric vehicles. But I guess what I
15 would say is, as you look at the legal and all the
16 challenges that are associated with the Energy
17 Commission's wanting team funding, supporting O&M, I
18 wouldn't just look at it as just a hydrogen issue; I
19 don't know if it's a natural gas issue or anything else,
20 but it certainly was true for charging stations and if
21 we're going to go into the O&M market with this money,
22 I'd like to think of that more broadly than just to
23 hydrogen, I guess.

24 COMMISSIONER PETERMAN: Great. Tom, did you
25 have any other comments?

1 MR. CACKETTE: No.

2 MR. COOPER: Okay, yeah, I have a couple
3 comments -- Peter Cooper with the California Labor
4 Federation. First of all, as far as the manufacturing
5 allocation, I have -- the Labor Federation has supported
6 more money for manufacturing because of the real interest
7 in creating jobs here in California. But I'll delve into
8 that a little bit more in my written comments later.

9 I come from the Workforce and Economic
10 Development Program at the Labor Federation and, so, I
11 just wanted to make a couple of comments about the
12 allocation there. We support the \$2.5 million for
13 workforce, we think that that's right on target. We have
14 a successful program with public transit agencies that
15 will train approximately 900 employees, and we believe
16 that is a very good example of how AB 118 funding can be
17 used.

18 One of the lead agencies that we've been
19 working with, L.A. Metro has been very successful in
20 funding and working with the Labor Federation, and we
21 believe that in the future they will be demanding more
22 and requiring more training funds.

23 One other area that I just wanted to bring up
24 briefly is the Electric Vehicle Charging Infrastructure,
25 and we think that there is going to be real demand for

1 workforce training in that area.

2 And lastly, I just wanted to mention that, for
3 Advisory Committee members, we will be holding a
4 conference down in Los Angeles, we're doing it in
5 collaboration with the Blue Green Alliance, and it's
6 going to be March 14th and 15th and 16th. And so this is
7 going to be an opportunity for you to hear more about
8 workforce training as it pertains to the green economy
9 and transportation and I encourage you to participate.
10 Also, the Blue Green Alliance is working on a green map
11 program which is going to focus on manufacturing in
12 California and some of the infrastructure needs,
13 including workforce. Those are all my comments at this
14 point. I'll go ahead and pass it on to the next member.

15 COMMISSIONER PETERMAN: Tim, before you go,
16 Simon noticed you've got your placard up; did you have a
17 comment on the hydrogen O&M?

18 MR. KNIGHT: I did and my comments were for
19 biofuels.

20 COMMISSIONER PETERMAN: Oh, okay. You can put
21 it down, then.

22 MR. CARMICHAEL: Good morning. Tim Carmichael
23 with the Natural Gas Vehicle Coalition. I have a few
24 comments on different issues. First, on Natural Gas
25 Vehicles Infrastructure, as I've mentioned to this group

1 before, natural gas is somewhat different, or has
2 different challenges than some of the other fuels. And I
3 think the staff accurately captured the industry's
4 perspective that the priority needs to be vehicles. And
5 by incentivizing or subsidizing the deployment of
6 vehicles onto California roads, you're going to do more
7 for this industry than any other use of your funding --
8 of this funding.

9 That said, there are cases where it's difficult
10 to get private financing for fueling infrastructure, so
11 I'm glad that staff didn't zero out infrastructure
12 funding, I know it's an "up to" category, but I would
13 encourage the staff and Commissioners to keep a piece
14 there because I think you will find you will get good
15 proposals for projects that need some public support,
16 that will help the overall system. In many cases, you
17 can get 100 percent private funding these days, but in
18 some cases you can't. Yeah, Jim.

19 MR. MCKINNEY: Tim, are you willing to work
20 with us to help us understand where those kind of unique
21 opportunities might be? Because, as you know, this
22 market really is maturing rapidly, so we see a clear need
23 in the public sectors, especially with the schools, but
24 if there are specific circumstances for private area
25 locations, or stations, that you could help us identify,

1 that would be really really useful.

2 MR. CARMICHAEL: I would be happy to. And I
3 have four members on my Board that work in that sector
4 almost exclusively, one of them here today, and I would
5 be happy to pick their brains on this, as well.

6 Very happy to see the continued support for
7 natural gas vehicles, we think we have a key role to play
8 in the future of clean fuels in the state.

9 Moving on to the biomethane, biofuels piece, I
10 want to echo concerns that Scott Smithline brought up,
11 and you'll also hear from one of my Board members today,
12 about the significant cut in the level of funding for
13 this sector. I thought it was interesting, Charles
14 highlighted how good these fuels are and as part of
15 telling us that we're cutting the funding in half, and
16 that is an area of concern in this current proposal, that
17 you know, here you've got one of the cleanest highest
18 potential fuels where, in California, we cannot -- we can
19 produce the fuel and generate jobs around that, we can
20 transport the fuel, generate jobs around that, and use
21 the fuel in our vehicles. It's in many ways a closed-
22 loop system that could all be done here in the state, so
23 multiple benefits beyond the environmental attributes of
24 these fuels. So you're going to be hearing from us in
25 writing and I think from several parties, that this is an

1 area we would like to see funding stay higher than you've
2 proposed.

3 There was a workshop recently about current
4 grants or solicitations for biomethane, or biofuel
5 production facilities, and as Charles alluded to in his
6 presentation, there's a big concern in the industry about
7 one of the constraints on that grant making program where
8 it says that, if you get funds to help develop your
9 facility, you can't go after LCFS or other credits. This
10 is a major concern for the industry; again, you'll hear
11 from others in the public comments today on this, the
12 logic doesn't seem to be clear and I'm not yet clear on
13 where CEC is coming from on this. You've got issues, you
14 know, it's like are we treating this public funding the
15 same as we're treating public funding in other areas,
16 whether it's ARB or CEC funding? This is not a situation
17 where these companies are required to meet a certain
18 standard. We're assisting, or CEC is assisting them
19 because we want to see more of this fuel used in the
20 state, it's not that they're required to produce it. And
21 that's an important distinction. And another important
22 one is -- and it was highlighted to me in an email and
23 hopefully somebody will speak to this in more detail
24 today -- but you might unintentionally be drawing a line
25 between gaseous fuels and liquid fuels, and that's

1 something that needs to be looked at because I don't
2 think that was CEC's intention, but the way this could
3 play out, that could be a problem.

4 Medium- and Heavy-Duty Demonstrations - I heard
5 Pat Perez and I quickly scanned the Award Notice on my
6 Blackberry and I have to say it's very exciting, I think
7 everyone in the room will be very excited about the mix
8 of projects that CEC picked. I'm sure there are going to
9 be people that are disappointed they didn't get picked --
10 funded, but the mix is very exciting. That said, CEC put
11 in \$17 million and are now about to put in another \$16
12 million; I am very supportive of supporting emerging
13 technologies, but I wonder whether it's appropriate to
14 take a year breather and see what happens with the
15 projects that have been picked and funded before -- even
16 though it's a small amount -- before we put \$3 million,
17 or whatever the number is, more into this area. I'm not
18 saying I'm opposed to the staff proposal by any means,
19 I'm just raising the question, does it make sense
20 strategically to look at how the money that's been
21 invested, or is about to be invested, plays out before we
22 invest more?

23 Emerging Opportunities -- I'm very supportive
24 of this. I remember discussions in the Speaker's office
25 where we all agreed that a small portion of 8118 funding

1 should be "bet" on long shots and, you know, "bet" in
2 quotes. But CEC is generally taking a pretty
3 conservative approach to this program, and I think that's
4 a good thing, we're talking about public funding here,
5 but a small percentage in this case -- 1.5 percent of the
6 proposed funding for this year to be set aside or used
7 for longer shots, if you will, things that are less
8 clearly going to succeed or deliver, but have very
9 exciting potential if they do? To me, that makes a
10 tremendous amount of sense. And the only thing I would
11 add to this is, if CEC is not already sharing proposals
12 that come in that look interesting, that you don't have
13 money for, with your contacts in the venture capital
14 community here in California, I think we should be. And
15 Will Coleman is on the line, I know, and he probably has
16 many thoughts on this, but I think the agency can provide
17 a service to a lot of these developers by sharing the
18 information and opening some doors that they may not be
19 able to open themselves. And I'm not suggesting that you
20 dedicate 10 staff to this, I'm thinking it's a small
21 project on the side that could have a lot of benefit.

22 Manufacturing -- I am very pro U.S. and
23 California manufacturing, but as I read the intro to the
24 Manufacturing section in the staff proposal, I was left
25 wondering does \$20 million from the CEC's AB 118 Program

1 really matter in the big scheme of things? The way the
2 intro reads is hundreds and hundreds of millions of
3 dollars coming in for clean tech manufacturing and
4 California being one of the best places on the planet to
5 try and find funding for that. I'm not opposed to CEC or
6 AB 118 money going to manufacturing, I just would like to
7 be a little bit more convinced than I am right now that
8 it really will have significant benefit compared to some
9 of the other things that we're talking about. If you're
10 subsidizing, you know, the purchase of vehicles, or
11 infrastructure construction, there is a ripple benefit
12 for manufacturing, there is, and I just think we need to
13 take a look at that relative to what's going on in the
14 private sector. In contrast to that, I think very little
15 private money is going into training and I think, you
16 know, echoing what Peter said about the level of funding
17 for training, I think the CEC should be putting more
18 funding into training because there just isn't enough
19 going on, and if we're talking -- you know, if Tom is
20 right about how quickly some of these technologies are
21 going to come on the roads, we don't have the technical
22 workforce in the state yet, in spite of all the great
23 workers we have, we don't yet have the technical
24 workforce to support those vehicles on the roads in
25 California. So I see the need for more training funding

1 coming out of this program than is currently planned.

2 And finally, I know this has been longwinded,
3 on the Centers for Alternative Fuels, I'm skeptical; I'm
4 not opposed, I'm skeptical. And what comes to mind
5 immediately is the Utility Information Centers, or Clean
6 Energy Centers. And as I look around the room, I imagine
7 most of the people around the state will have been to one
8 of those and been to a meeting at them, and they're neat,
9 they've often got an interesting vehicle or, you know,
10 interactive schematics of technologies on the walls, and
11 I learn something, and they're good meeting spaces, but
12 how much value is there in the CEC with this pot of
13 funding supporting development of new versions of that?
14 Again, I'm not opposed, I just would like to be more
15 convinced that that's a really good investment at this
16 time. Thank you very much.

17 MR. SHEARS: I just had a clarifying --

18 COMMISSIONER PETERMAN: Go ahead.

19 MR. SHEARS: -- question related to Tim's --
20 because I just pulled up the PON just to double-check on
21 the credit generation issue, and this was an issue that
22 the first year of the Advisory Committee we spent a lot
23 of time discussing and working with staff on. And from
24 what I read, it's consistent with the agreed upon policy
25 position that the Advisory Committee took in the first

1 year, which is it's a proportional discount relative to
2 the amount of matching funding that's coming in from the
3 private side, so I'm just wondering if you could
4 elaborate further on -- because it's not a complete, you
5 know, "You can't claim credit, you can claim credit
6 proportional to the matching funding." So I was
7 wondering if you could elaborate further on that.

8 MR. CACKETTE: I'll make one comment and then I
9 think Chuck White is still here and he's really more
10 expert on this than I am, and I'm happy to get some input
11 from some of my other Board members that have also
12 commented to me about this. But one of the
13 characterizations -- or actually, I've received this
14 characterization a few times from some of my members that
15 are developing these projects -- that if you take away --
16 and whether it's a discount, or you can't play in the
17 credit market, if you take that away, you could give
18 somebody a biomethane production facility -- no private
19 money whatsoever, you could give it to them -- and
20 because of the price of other fuels today, they could not
21 make money with that for the foreseeable future, and
22 that's the problem. So their business plans are counting
23 on some credit sales, or income, to make money with the
24 facilities until there's more demand for that fuel. So
25 that's the bottom line that scared me when it was briefed

1 that way.

2 COMMISSIONER PETERMAN: Let me just interrupt
3 for a second here, this is Commissioner Peterman, and
4 just to make sure everyone is aware of what we're talking
5 about here with this credit issue, I would ask Pat just
6 to summarize the point and it came up particularly in
7 this Biofuels Workshop and may be coming up in future
8 solicitations.

9 MR. PEREZ: Sure. Thank you, Commissioner
10 Peterman. Certainly, under the statutes of AB 118, you
11 know, the funding of projects, we cannot provide funding
12 for those things that are receiving or required by
13 Federal, State, or other local laws. So our
14 interpretation, or at least the advice I've had from our
15 legal counsel, there is a section also in our Code of
16 Regulations called Section 3103, I believe, and the
17 interpretation of how that applies to the AB 118 statute
18 that prohibits us from funding those projects is we took
19 the approach that we would reduce, as John described,
20 those credits as explained several years ago in an
21 earlier Investment Plan, so that's the cautious approach
22 we're taking right now. Obviously, that's subject to
23 interpretation and certainly perhaps other attorneys
24 might argue otherwise. One of the options we have,
25 certainly, is to perhaps further explore this issue, but

1 in order to explore it, we would probably have to
2 entertain opening a rulemaking, to go back, because these
3 are existing laws that are in place and that interplay
4 between AB 118 and I think it's Section 3103 of the Code
5 of Regulations, you know, you have to bring the attorneys
6 to the table to get into greater depth on that. But
7 that's why we're concerned and, in tandem of looking at
8 both of those aspects, AB 118 statute and the Code of
9 Regulations, that that's basically what we've concluded,
10 and that's why we discounted those efforts for the Low
11 Carbon Fuel Standard, because that is a regulation. But,
12 you know, I think it merits further information and I
13 look forward to hearing from Mr. White on this, for his
14 legal guidance, and from others. But that's the way
15 we've interpreted it internally.

16 COMMISSIONER PETERMAN: And those regulations
17 also require ARB guidance, and so this is something that
18 we welcome their input from, as well, and also just to
19 understand how this is actually going to work on the
20 ground, whether this will thwart projects, etc. And so
21 that's part of the feedback that we're looking for
22 generally, although that doesn't necessarily pertain --
23 it pertains more generally to a '12-'13 Investment Plan,
24 I appreciate that it is a concern.

25 MR. MCMAHON: A quick point on the training

1 issue that Tim raised. The State Budget cycle and the
2 need for the Employment Training Panel to get separate
3 appropriation authority has had something of a smoothing
4 effect in terms of the availability of funds, so we
5 expect that, in the '12-'13 budget year that the actual
6 amount available for project funding would be the \$2
7 million allocated in the plan, plus a carryover of around
8 another \$2 million. So, somewhat higher.

9 COMMISSIONER PETERMAN: Great, thank you. Is
10 there anyone on the phone from the Advisory Committee who
11 has any comment they want to offer right now on the
12 credit discount issue?

13 MR. NORBECK: Yeah, this is Joe Norbeck. Can
14 you hear me?

15 COMMISSIONER PETERMAN: Yes.

16 MR. NORBECK: Well, in everything - there's a
17 couple things, I'll send written comment. But I have a
18 few questions and concerns. Number one, you know, I
19 brought this up several times, I think this Committee,
20 well, the CEC should do a closer connection with PIER
21 funding on a lot of the alternative fuels and things so
22 that there is a better coordination of these activities.
23 And in several of these categories and things, I know for
24 a fact that Riverside is getting funding from PIER that
25 would also be pertinent to what the (inaudible) is doing.

1 So I'm encouraging, then, to do that. I brought it up
2 before and I don't see any real activity on that.

3 The other thing is a lot of the fuel issues are
4 being addressed by DOE, DARPA, Department of Defense and
5 I note somebody was mentioning jet fuel, I know for a
6 fact that there is a large program on that on renewables.

7 Another issue, and I'll detail that this is a
8 personal thing, about the Center for Alternative Fuels
9 and Advanced Vehicles, I'd like to, you know, advise the
10 Committee that probably the premier facility for that in
11 the country at a university, certainly, is at UC
12 Riverside. And with a \$4 million investment from Chuck
13 Imbrecht 20 years ago, through PVEA, CCEERT has developed
14 and has brought in \$200 million in funding and training
15 for the State of California. So \$3 million is not going
16 to -- from my perspective -- going to do very much,
17 unless you get a soft science facility (inaudible).

18 Finally, on the training, the California
19 Council on Science and Technology has done a major report
20 not too long ago on training needs in the State of
21 California for jobs and, also, I think we should make a
22 connection, there may already be, with some of the fine
23 community colleges that have programs throughout the
24 state on training, and you may want to investigate that.
25 And I'll provide written comments on this. So, thank

1 you.

2 COMMISSIONER PETERMAN: If you have a specific
3 comment on something that was said, Bonnie, I want to get
4 back into the cycle.

5 MS. HOLMES-GEN: On the credit issue.

6 COMMISSIONER PETERMAN: Yeah, on the credit
7 issue.

8 MS. HOLMES-GEN: I just wanted to comment that
9 I remember well the discussion earlier about this issue
10 and I think that, you know, I agree with the CEC's
11 approach, I think it's consistent with the directive in
12 AB 118 to ensure that these funds are used for projects
13 that are above and beyond and surplus to regulatory
14 requirements. So I'm interested to hear the discussion
15 and I certainly think it's important to hear all the
16 viewpoints, but at this point, I think CEC has taken the
17 right approach.

18 COMMISSIONER PETERMAN: John, is your tag up to
19 talk about this issue?

20 MR. SHEARS: Sorry.

21 COMMISSIONER PETERMAN: Okay. Let's move back
22 to Tyson, then. Thanks.

23 MR. ECKERLE: All right, Tyson Eckerle again
24 with Energy Independence Now. I just had a few comments
25 and I just wanted to follow-up on the Hydrogen O&M

1 discussion and, first of all, I appreciate CEC's
2 flexibility, I looked at the PON that came out yesterday,
3 and just for keeping the option open for O&M, I think, is
4 great. I think the question is still out as to what the
5 best way to use the money is, and so I think it's good to
6 keep that flexibility.

7 On the way of flexibility, there is a number of
8 different hydrogen stations, to keep it on the hydrogen
9 topic, that we can fund, and there's really the cluster
10 areas and there's also collector stations. So, in the
11 cluster areas, it's much easier to make the business case
12 in the future because there will be more vehicles planned
13 to use those things, but it's more difficult to make the
14 connector station case, and that might be a longer term
15 investment type of thing. And so the point I'm trying to
16 get to is that the cluster areas might make sense to
17 attract businesses, whereas the State might need to step
18 in and help fund some of the connectors. And that issue
19 becomes important as we're trying to grow the market, and
20 having talked to Fuel Cell Vehicle drivers, just one
21 station between Los Angeles and San Francisco opens up a
22 whole other range of possibilities, but it's not likely
23 to get a business person in to invest in that station
24 because their return on investment is probably too long.
25 So just something to keep open and the flexibility of the

1 solicitation that is going out in the future for
2 hydrogen, I think, is a good move.

3 On that, I think the other thing I want to talk
4 about is the biofuels and, so, I was reading that \$20
5 million competitive grant. I think Simon and Tom brought
6 up some really good points and it really comes down to
7 the selection criteria that goes into determining what
8 the best project is, and so I think we have to make some
9 decisions as to what the strategy is. Like biomethane
10 has brought up -- has a lot of great potential and
11 there's a lot of synergies from the hydrogen side, on the
12 natural gas side, you know, it captures a lot more of the
13 energy than the pre-landfill type of thing; but as far as
14 how it competes against diesel or gasoline substitutes,
15 I'm not sure. But looking at the future, I think as a
16 system-based approach, you know, looking towards -- Tom
17 was saying shifting away and taking care of those sectors
18 that cannot be offset by like hydrogen and electricity
19 might be something to really consider as far as the
20 selection criteria goes.

21 And the last thing I wanted to -- the E85, I'm
22 very interested to hear that the business case kind of
23 proposal going forward, I think there's some interesting
24 potential there, but I was also a little bit worried just
25 looking at the language, you know, as far as the cost per

1 mile and all that kind of stuff, and marketability. So I
2 think it's something that needs to be considered. And
3 that's all I have for now. Thank you.

4 MR. SCHLAGETER: I just wanted clarity on your
5 last comment. My name is Martin with the Coalition for
6 Clean Air. I missed what your last comment was focused
7 on.

8 MR. ECKERLE: Oh, E85, sorry.

9 MR. SCHLAGETER: Oh, E85, thank you.

10 MR. MICHAEL: Jack Michael with Recreational
11 Boaters. Previous meetings, I've discussed the boaters'
12 concerns with E85, particularly, but ethanol not being
13 compatible with the marine environment, and looking at
14 some studies that would help us in that regard, and I
15 haven't heard anything today because we're finding that
16 Butanol may be a much better fuel and not have any of the
17 moisture problems that E85 has, higher energy output,
18 less cost, and I haven't heard anything about Butanol, I
19 haven't asked the staff whether they've been following
20 anything on Butanol. We'll provide you some information,
21 then.

22 DR. KAFKA: This is Steve Kafka, California
23 Biomass Collaborative. There is effort going on
24 nationally on the production of Butanol by, personally,
25 my group at U.C. Davis is connected to a much larger

1 group on the Pacific Coast that got a very large USDA
2 grant to look at biomass sources to Butanol, favorably,
3 and there are several activities like that going on, but
4 they may not be complementary to this activity. I
5 suspect that if CEC got a Butanol proposal and it was
6 well designed, it would certainly be welcomed, you know,
7 favorably considered.

8 MR. MUI: Guess I'm next here and this
9 microphone doesn't seem to want to turn off, so I just
10 wanted to warn folks in case they hear sounds over here.
11 First off, I did want to thank CEC staff, as well as the
12 Commissioners, on developing this report and I think
13 obviously there's a lot of hard nuts to crack here, and
14 that you're trying to do a lot of things here which I
15 think are challenging and we're all around here at the
16 table, I think, to really try to make things work. My
17 comments are with respect to the biofuels funding and I
18 think one of the things that I kind of want to tease out
19 a little bit, when we talk about biogas vs. renewable
20 diesel, or renewable gasoline, ethanol, I think each of
21 these technologies are at different stages, different
22 stages of cost-effectiveness. And one of the thoughts
23 that I was thinking about is, you know, largely the \$20
24 million there in terms of capital investments for a
25 plant, you know, we're not going to start an entire new

1 industry, but we do want to have for a lot of these first
2 of kind plants the ability to move forward with first of
3 kind and bridge that gap between the first of kind type
4 of commercial plants and bringing down -- driving down
5 costs over the second of kind, third of kind plants. And
6 one of the -- I see a lot of the focus on developing
7 facilities, but I didn't see as much in terms of the
8 actual procurement of advanced biofuels here in the
9 state, and I wanted to get your thoughts on that in terms
10 of linking sort of specific buyers, whether they be
11 fleets from public entities, from private entities, from
12 these facilities -- to the specific facilities -- and in
13 a way that could possibly leverage the CEC funding for
14 these first of kind plants because a lot of the renewable
15 diesel that Tom was talking about, renewable gasoline,
16 they are more costly. Because they are first of kind,
17 they're very much subject to, you know, the price of oil
18 and that shifting over time; we just saw the price of oil
19 shoot up, now down, same with the biogas, natural gas
20 prices. And so a lot of these projects, I think, are
21 subject to that sort of uncertainty and I'm wondering, in
22 terms of if you're able to help aggregate procurement in
23 the state in a way that could leverage the resources of
24 CEC here, just wondering if you've given any thought to
25 that.

1 MR. MCKINNEY: Yeah, thank you, Simon. Jim
2 McKinney here from Commission staff. The last paragraph
3 of page 18 of this current Draft Investment Plan speaks
4 to that in kind of oblique way, and Bob Epstein and Mary
5 Solecki, and I think others from the E2 firm, have
6 approached the Commission with this concept of how to try
7 to help the emerging biofuels markets because I think the
8 general perception is it's not as evolving as we all
9 thought it would be years ago. Our funding is important,
10 but it's just one slice. So is there a way to create an
11 economic poll from the purchaser side and cover that, or
12 partially cover that incremental cost with AB 118 funds?
13 And I think Ms. Solecki from E2 is here in the audience
14 and can speak to that when we get to the public comments
15 section.

16 MR. MUI: That's helpful. And my last comment
17 here was regarding, if I could just jump categories here,
18 back to the Manufacturing, following up I think on what
19 Tim Carmichael had said. You know, one of the things
20 about manufacturing, again, in terms of resources,
21 there's a lot of capital investment happening here in the
22 state for clean tech, and I'm just wondering as you look
23 forward, you know, managing that risk about specific
24 projects, whether or not you've thought of, you know,
25 when we talk about manufacturing, while there's also

1 industry collaborations, partnership that can be
2 developed where you have facilities that are essentially
3 cost-share facilities, or we've seen this in the Silicon
4 industry, where facilities that are normally costly can
5 be shared by different industry participants in a way
6 that helps reduce that manufacturing cost, so in the
7 battery industry it's testing facilities, and I'm just
8 wondering if that category, if you've thought of that or
9 ways to leverage, again, CEC's funding.

10 MR. PEREZ: These are excellent points, Simon.
11 One of the things that we did and one of the challenges
12 and difficulties we had in getting out the medium- and
13 heavy-duty solicitation, which is a very innovative
14 solicitation because one of our overall thrusts with that
15 solicitation, the one that I mentioned earlier today that
16 many of you have been waiting for, what we did was we
17 designed that solicitation to force parties that would
18 not normally work together in terms of the scoring
19 criteria, so that what we hopefully achieved and we'll be
20 looking at the proposals in further detail, is that it
21 brought Southern California, Central Valley, Bay Area,
22 Sacramento parties all collaborated to bring their
23 resources together to build these proposals that have
24 benefits beyond their own parochial districts and
25 regions, air basins. And so what it did was it brought

1 more money to the table by encouraging and facilitating
2 the development of partnerships. So we're hoping that
3 this will be more of a model solicitation for other
4 areas, too, but because we recognize the challenges and
5 difficulties of limited private capital and all, and
6 that's why we completely went back and re-thought how we
7 construct and develop solicitations, to kind of make
8 parties and different parts of California actually work
9 together in submitting these proposals, and then what we
10 did is we had major administrators who were responsible
11 for bringing all these geographically disconnected
12 parties to the same table, to develop these programs
13 together and these proposals. And we're very excited
14 about the proposals that we received. When you look at
15 the number of projects we were unable to fund, but the
16 worthy projects, we hope through our approaches of
17 providing head room that we're going to be able to, with
18 the concurrence of this Advisory Committee, to provide
19 more funding in those areas. So your comments are well
20 taken.

21 CHAIR WEISENMILLER: I was going to drop in
22 just for a second on the manufacturing issue and just
23 remind people, I'm on the CAETFA Board, and one of the
24 things CAETFA has is a sales tax exemption and when
25 Solendra went bankrupt we were reminded that they were

1 one of the recipients of that, and it's a little bit
2 cleaner than manufacturing grants in the sense that other
3 people are putting their money, including the Federal
4 government, and we were talking about an exemption on the
5 sales tax. But that certainly gave a lot of legislative
6 concern on whether we were wasting California's limited
7 funds and, so, Treasurer Lockyer moved basically to
8 suspend the program while we had a chance to basically
9 take a look at it and make sure that we were comfortable
10 with it and I certainly as a Board member supported his
11 suspension. Ultimately I think, you know, after
12 legislative hearings everyone got comfortable. One of
13 our challenges, obviously, is we're competing with other
14 states to really bring manufacturing into California,
15 many of the other states have much more generous programs
16 to do that. And so we really need every tool we can
17 make, we can find, to deal with that competition going on
18 in other states, by other countries, frankly, but at the
19 same time realizing there are some risks and we have to
20 be pretty prudent on how we make these decisions.

21 MR. KNIGHT: Ralph Knight, Napa Valley Unified
22 School District. I just want to thank the Commission,
23 staff, and everybody who has opened the door to allow
24 school bus to be a major portion of this -- be a player
25 of this thing. And I applaud everybody, too, to allow me

1 to be on this committee, to work with this. The yellow
2 school bus, of course, everybody has been seeing it on
3 the news, the target that it has become here in
4 California. It's a tough industry out here for us. When
5 we transport these kids to and from school, every day out
6 here, if the school bus goes away, where are those kids
7 going to go? Those kids are going to go back into the
8 cars, they're going to go back into whatever ways that
9 they can get to school.

10 You know, I guess over the years we've been
11 involved with alternative fuels, you know, I have
12 probably one of the largest CNG fleets in Northern
13 California, I brought the first Plug-In Hybrid School Bus
14 to California, I brought the first Hybrid Special Needs
15 Bus to California, we've done an awful lot with
16 alternative fuels, and I think that, again, I applaud the
17 Commission and ARB and local air districts and stuff
18 that's allowed us to do that because, without that, we'd
19 never be able to see those type of things come to the
20 yellow bus industry. But I think we've become a player,
21 that we've been able to see marked improvements. My
22 Plug-In Hybrid Bus is 15 miles per gallon compared to the
23 diesel version that is six, you know, the early on that
24 we did with the natural gas vehicles back starting in
25 1995, when we were paying \$5.50 a gallon for diesel fuel,

1 I was paying less than \$2.00 a gallon for natural gas.
2 So probably because we were so early on in getting into
3 this field is probably what's kept Napa Valley Unified
4 afloat today, and especially with the target that is on
5 the back, as we sit today.

6 You know, I think alternative fuels is the
7 thing for the yellow bus; the yellow bus is a excellent
8 flag to see out on the road. The kids will be hauled to
9 and from school every day. The American Lung Association
10 has been behind every movement that we've ever made as
11 far as our alternative fuels are concerned, and I applaud
12 them, too. It's a visible site and I just don't want to
13 see the yellow bus go away because there are fuels that
14 work, it's hard to get probably a lot of my Compadres
15 that have the gray hair and the years behind us, 40 plus
16 years, or whatever in this industry that are ready for
17 retirement, it's hard to change from that old diesel bus
18 to climb into, turn the key on, and it fires off and
19 rolls every day, to try an alternative fuel that maybe
20 doesn't roll every day. I had one of the first electric
21 buses in the states, here, that we were lucky if it
22 rolled once a month -- we didn't worry about it every
23 day, but once a month if we were lucky. We turned over
24 30,000 miles on those two buses struggling to learn.
25 Today's technology probably was about eight years after

1 those first two, we repowered them. I saw one of those
2 two buses that ran three and a half school years without
3 a down day, a true electric bus. Cost factor to me?
4 Roughly about four cents a mile to operate that bus on
5 the road. How efficient can you get?

6 And I think in today's time now, we're seeing
7 so much more technology change and usually school bus is
8 the last to get it, but I think that we've surfaced up to
9 see a little bit more coming to the school bus industry
10 than what we have in years past. And, again, I think
11 that's - everybody needs to be patted on the back here
12 for making that happen to that school bus industry, and I
13 guess I'm here to continue to try to fight to keep that
14 yellow bus on the road, keep those kids in a safe
15 position where they need to be, and keep them in a clean
16 ride to school every day, and keep those cars out from in
17 front of the schools bringing all these kids to school
18 every day.

19 COMMISSIONER PETERMAN: Thank you very much.
20 Martin.

21 MR. SCHLAGETER: Thank you. Martin Schlageter
22 with the Coalition for Clean Air. Echo previous
23 speakers' thanks for all the work put into this by the
24 Commission, and the opportunity to have some input. Let
25 me lead off a couple comments that I have, lead off with

1 the Emerging Opportunity sector because I know you asked
2 specifically for comments on that. And I'm very
3 supportive of maintaining some agility here on this, and
4 I wonder if one avenue for where funding can be directed
5 through, perhaps, an Emerging Opportunities category, is
6 being able to leverage your funding with other
7 solicitations that have been put out. For example, you
8 know, when Air Districts have programs where they're
9 pursuing alternative technology, or even vehicle buy-
10 downs, they may be doing some of the screening work that
11 offers opportunities, and that might be one way in which
12 you can leverage funding efficiently. And even
13 internally it seems to me, if I understood the discussion
14 around the manufacturing facilities component, that you
15 have a current solicitation where you have an over-
16 subscription, essentially, of projects you'd like to
17 fund, and this current -- this 2012-2013 funding could be
18 backfilled to those that you weren't able to fund in the
19 last solicitation. Okay, so --

20 MR. PEREZ: We do have - we would not be able
21 to do that until after we have an adopted plan for 2012-
22 2013.

23 MR. SCHLAGETER: Sure. I hear that, but in it
24 I am noting that you've identified projects through a
25 current solicitation and there is an efficient way to get

1 money out the door. Similarly, you know, there may be
2 other solicitations out there that aren't CEC themselves.

3 And relatedly, you know, funding that you've
4 identified here for the CVRP vehicle buy-downs, I think,
5 is -- it's appropriate that you're putting additional
6 money into that because where it's such a critical time
7 in the deployment of those vehicles. Perhaps relatedly,
8 I just want to highlight the expectation in the South
9 Coast area that zero emission or hybrid zero emission
10 vehicle are going to be targeted for the ports and
11 freight sector, and whether that comes through an
12 emerging opportunity because this is still being defined,
13 or whether it's in your heavy-duty sector, I'm hopeful
14 that we'll be able to create some space for that because,
15 again, at a critical time of growth in the freight sector
16 down in the Southern California area, and with the Air
17 District and SCAG and others leading to try to identify
18 ways to make that growth possible, but tolerable.

19 And then I want to go in -- I guess I can leave
20 off with this -- I want to go back a bit to a
21 conversation made during a presentation about the
22 alternative fuel production combination of those
23 categories. And I guess what I would just be seeking is
24 a further conversation, then, of what the criteria for
25 scoring the projects would be. I am philosophically, you

1 know, amenable to the idea that the different fuels would
2 compete against one another, but before we set that up, I
3 would just like to have some conversation about what
4 exactly the goals and priorities and emphases are; Tyson
5 indicated one, you know, one possible criteria that a
6 unique sector, if there is a unique sector that a fuel
7 can serve, that other fuels can't, you know, that might
8 merit something. And we've talked about greenhouse gas
9 and other goals in terms of biomethane, as well. So I
10 would just encourage a further conversation about that
11 criteria as we lead up to a competitive scenario and when
12 there may be other competitive scenarios in the future as
13 we gain future experience on this.

14 And just to tag onto that, my final comment
15 would be, you know, Mr. Carmichael's skepticism about the
16 Centers for Alternative Fuels and Vehicles, again, only
17 if you're going into that with specific goals and
18 criteria, you know, does that sort of give assurance that
19 you are pursuing a specific objective and I think there's
20 further discussion about that is merited. Thanks.

21 MR. MCKINNEY: Commissioner Peterman, a couple
22 of staff responses to what Martin put out there. In
23 terms of coordinating with other solicitation schedules,
24 whether that's from the Air Districts or DOE, we have
25 tried to do that and I know Mr. Miyasato was here from

1 South Coast, we also work very closely with the Bay Area
2 AQMD, it's very challenging. I think this is where our
3 label as bureaucrats is warranted because we all have
4 slightly different schedules, slightly different marching
5 orders, slightly different ways of doing business, and
6 it's very challenging to coordinate. We have tried, we
7 will continue to try. The counterpart for the current
8 PEV Readiness solicitation, we do reference the DOE
9 solicitation for a very similar approach, so we are
10 trying to get some synergy going there. So I just wanted
11 to acknowledge that it's a great idea and we are trying
12 to do it, but again, we are bureaucrats at heart,
13 ultimately, so...

14 COMMISSIONER PETERMAN: Scott, before you offer
15 your comments, in your initial comments you mentioned
16 that there is going to be significant interest and
17 perhaps monies flowing into the landfill diversion
18 activities over the next upcoming years, so I wanted you
19 to speak more to that, what are those sources, and then
20 what is the expected need for Commission investment in
21 this space? Is there such a need?

22 MR. SMITHLINE: Thank you, Commissioner
23 Peterman. I'm not sure I can speak to where the sources
24 of money will be. I think what I can most accurately
25 speak to is the policy direction that our department will

1 be heading to comply with the statutory mandates that are
2 on us. I think that I was sufficiently explicit in my
3 previous comments about the mandates within AB 341;
4 again, if you look at the waste going into landfills
5 currently right now, you very quickly see the pie chart,
6 you know, two-thirds of that is organic. I mean, we just
7 have a massive amount of carbon, it's the primary thing
8 that we're landfilling. To comply with our mandates,
9 we're assuming or estimating that we'll need
10 approximately, you know, somewhere on the order of 10
11 million tons of additional organics diverted from the
12 landfill by 2020 on an annual basis. That is a massive
13 undertaking.

14 So in order of priority from us, I would say
15 order of operations and our priorities, our first order
16 of operations would be to find strategies to divert those
17 organics, and I'll talk a little bit about that in a
18 second. And then, secondly, we have enough waste in
19 place in landfills in the State of California to generate
20 significant amounts of energy and gas for the next
21 several decades. So I think we can't underestimate the
22 importance of those investments, as well. They're both
23 going to be very important to us from a strategic
24 perspective.

25 You know, our primary outlet for this material

1 is going to be composting operations which, of course,
2 are not going to provide direct energy benefits, but they
3 will provide energy efficiency benefits and other
4 incredible environmental benefits. But on the energy
5 side, we're really looking at biomass conversion, which
6 is going to be the direct energy, the distributed energy
7 side, and then anaerobic digestion, and that's really
8 what we're talking about here.

9 The number one item that we throw away in the
10 State of California is food waste, 15.5 percent of what
11 goes into the landfill is food. This is just a massive
12 source of energy available to us, so we are behind the
13 curve. I'm actually very excited to say that, as we
14 speak today, there are actually anaerobic digestion
15 facilities pre-landfill being built, construction is
16 happening today in the State of California. This is very
17 exciting, and we just haven't had this. They are the
18 facilities that you have previously funded here and help,
19 so I can't overestimate the importance of these
20 investments. These are small start-up companies. We're
21 talking in the handful of facilities that we have now,
22 but when you look at the other countries that have done
23 this successfully, they have thousands of small biogas
24 facilities serving multiple needs, including direct
25 injection into the grid, fleets, and other outlets. So I

1 don't know exactly what the number will be, but I can
2 tell you that the most important thing is that these
3 small businesses that are starting up now get a clear and
4 consistent message from the Commission that this is
5 something that is going to be supported. So I hope
6 that's responsive.

7 COMMISSIONER PETERMAN: Thank you.

8 MR. CARMICHAEL: Could I add one comment?

9 COMMISSIONER PETERMAN: Okay. Tim Carmichael
10 with one comment, go ahead.

11 MR. CARMICHAEL: Just feeding off of what Scott
12 said, I was reminded that I neglected to say that our
13 membership is very supportive of what Scott just outlined
14 as far as a focus on pre-landfill, but as I've said in
15 the last Investment Plan, we think it's a mistake to
16 preclude the possibility of funding a landfill project.
17 As we went back and forth with Commissioner Boyd a few
18 months ago, there is this perception out there that we
19 have got the landfill tapping to transportation system
20 figured out, and yet we have one, maybe two of those
21 projects in the state today. So I just want to put back
22 on the table that, even if you favor pre-landfill
23 projects, don't eliminate the possibility of funding a
24 good landfill project to transportation because there's
25 still very much a need out there for public support for

1 that approach. Thank you.

2 MR. SMITHLINE: Uh, just very briefly to
3 respond -- Scott Smithline, CalRecycle. We have, I
4 think, a consistent position with Mr. Carmichael; I just
5 wanted to make that clear.

6 MR. MCMAHON: Brian McMahon, Employment
7 Training Panel. Per my earlier comments, we do support
8 the \$2.5 million allocation for workforce training needs.
9 I would also mention relative to a couple of the earlier
10 comments that, within the portfolio of projects, we have
11 two EV manufacturing companies and we're pleased to see
12 the acceleration in training that's occurring in those
13 projects. We also work with community colleges, which
14 was one of the other comments, and we found them very
15 effective agents, as well.

16 COMMISSIONER PETERMAN: Thank you.

17 MS. TUTT: Eileen Tutt with the California
18 Electric Transportation Coalition. Just a few things,
19 not surprisingly, first, on the Electric Vehicle Charging
20 Infrastructure, I think that may be a little underfunded.
21 Although I appreciate the \$7.5 million, we're hitting a
22 point, particularly with the DOE and CEC effort, which I
23 want to say, I do feel like, for a bunch of bureaucrats,
24 you really have coordinated well on that, and
25 particularly in the effort to collect the data that we're

1 going to need to really estimate whether or not, you
2 know, how to put in charging stations in the state. So I
3 do want to acknowledge and give you credit for that
4 because I think it's very difficult. So I would like to
5 think about perhaps upping that number and I don't want
6 to pick on any other fuels, so I'm not going to grab from
7 them, necessarily. But I do think this broad category of
8 alternative fuel production for \$20 million, I'd like to
9 kind of look at that and think about whether or not some
10 of that could be shifted for electric vehicle
11 infrastructure.

12 I want to point out that I do think there is a
13 role for fast charging, I know there is some controversy
14 around that, but I think that we do need some fast
15 chargers and we shouldn't take anything off the table at
16 this point, and the truth is that if there is going to be
17 investment in that kind of infrastructure, there is
18 probably going -- and more creative workplace charging
19 facilities, well, programs like putting in Level 1
20 chargers in the workplace. If you're going to get more
21 creative and really meet the marketplace demand out
22 there, it's probably going to require more than \$7.5 --
23 those vehicles are available today, the numbers are
24 ramping up quickly, new models are coming out this year.
25 We need to ramp up and, as Tom pointed out, sometimes it

1 takes a little while to get this money on the street. So
2 that was my first comment.

3 I also -- I want to better understand, and
4 perhaps I can just talk to Tom offline at some point, but
5 I do -- I don't know if anyone around this table also
6 wants to better understand how the clean fuels outlet,
7 MOA, which is not a regulation, not a mandate
8 necessarily, ties in with this money; how many stations
9 are paid for by this money and, to be honest, I would
10 like to see the oil companies step up and pay for some of
11 those infrastructure stations, and I really don't want to
12 see this money being used to divert some of their costs,
13 I don't think that's right, I don't think that's the
14 intention of the people of California, and so I know it's
15 not a law, but if the MOA requires \$100 million in
16 stations, then I'd like to know that that \$100 million in
17 stations doesn't count \$11 million from the people of
18 California. So if this is addition, good; if it's not,
19 I'd like to better understand why that decision was made.

20 Moving down to the Alternative Fuel and
21 Advanced Technology Vehicles, on Medium-Duty and Advanced
22 Vehicle Demos, I am concerned about the \$3 million and
23 the amount that has gone down, in part, because as Martin
24 said and I think Bonnie said, I really think this goods
25 movement efforts that's happening at the State, but

1 really at the local level, particularly I want to
2 recognize the work that South Coast AQMD has done, the
3 Bay Area has done, I do think that that's where a lot of
4 things are going to happen is in sort of the Alt Vehicle,
5 Alt Fuel Vehicle, Heavy-Duty, Non-Road, Off-Road, getting
6 our trucks off oil is important because, you know, the
7 light duty sector is such a small -- is small relative to
8 their demand for oil relative to the heavy-duty. So I'd
9 like to at least look at that and better understand why
10 we're going down so dramatically at a time when, clearly,
11 goods movement and heavy-duty vehicle alternative fuels,
12 alternative fuel effort there, is ramping up. And I
13 think it shows great promise.

14 Finally, well, almost finally, on the workforce
15 agreements, or the workforce efforts, I actually think
16 what the community colleges can do is pretty compelling.
17 I agree with Peter that I think, in the Electric Vehicle
18 world, there is going to be training necessary and I'd
19 like to see some of this money go to the community
20 college efforts. I know that I've talked to you before
21 about whether or not the community colleges are allowed
22 to create a curriculum to help with this workforce
23 training -- I am just going to put out there that I'm
24 going to be asking, and if you don't know the answer now
25 -- can they or can they not develop curricula because I

1 know that was a question and I think it's very important
2 that they be able to do that, I think that's the way to
3 expand workforce training throughout the state and
4 perhaps throughout the nation, so I'd like that to be
5 allowed. And I think this number needs to be a little
6 higher. I was going to comment on the Centers, but I'm
7 not going to do that.

8 On the question that you specifically asked
9 about whether we need to continue support for medium- and
10 heavy-duty all-electric vehicles, a resounding yes. I am
11 surprised that question is being asked, to be honest, at
12 this time. So that concludes -- I'll provide written
13 comments, but that concludes my --

14 MR. MCMAHON: If I could add my comments
15 relative to community colleges, certainly the
16 relationship that the Employment Training Panel has with
17 community colleges is just one element of what community
18 colleges can do in terms of developing curriculum in
19 delivering training, but we typically touch a community
20 college through what we call Multiple Employer Contract
21 Structure where they will develop a curriculum, in this
22 case in conjunction with their Center for Applied
23 Competitive Technology, and that curriculum is marketed
24 typically to small and medium-sized employers within
25 their service area. And that's the type of structure

1 that we touch with the Employment Training Panel
2 infrastructure.

3 MR. PEREZ: Okay, and this is Pat Perez, Energy
4 Commission. Again, our work force expert in the back has
5 nodded her head that, indeed, this funding can be used
6 for curriculum development, so...

7 COMMISSIONER PETERMAN: Ralph, did you have a
8 specific question on this point, or comment?

9 MR. KNIGHT: Yeah, I guess I just wanted to
10 talk more about the service centers and things like that
11 at the community colleges and different places. We had
12 the opportunity to have our high school kids out of New
13 Tech High School work with U.C. Davis when we were
14 struggling to keep our electric busses up on the road,
15 that those kids shadowed those students from there. U.C.
16 Davis, like Riverside, has an excellent excellent
17 opportunity and, I guess, to be a part of that, to see
18 what went on with those kids that worked with our
19 students hand in hand was a plus. I think the Centers,
20 to teach our technicians and stuff that are working on
21 this technology out here, I think, is a plus. I saw one
22 of my mechanics fly about 20 feet against the wall when
23 he got the batteries hooked up backwards one time on a
24 battery pack on one of those busses, so, you know, I
25 think that training is a real big portion of it. You

1 know, in 1995 and '97 when these vehicles were coming
2 out, you got the keys handed to you and said, "Here's
3 lots of luck. Have a good time." And that was about the
4 training, the most training that the mechanics get. So I
5 think that the education that we need to have with the
6 new technology that is out there is very very important.

7 COMMISSIONER PETERMAN: Thank you. Okay,
8 Peter.

9 MR. COOPER: Thanks. Peter Cooper with Labor
10 Federation. Regarding community colleges, you know, I
11 would just like to highlight that some of our JATCs have
12 worked very collaboratively with community colleges, a
13 lot of them have -- an excellent model here in Sacramento
14 is with the Los Rios Community College District, and the
15 IBEW and NECA. One thing to remember, too, is that the
16 Joint Apprenticeship Training Councils that are - they
17 are run jointly, so with industry and labor at the table,
18 and so they really understand what the job needs will be
19 coming up and so they were training for jobs. And just a
20 quick question for Brian, I just had a question about if
21 you foresee more requests from ETP for training as it
22 relates to the manufacturing sector, you know, I see this
23 touching a variety of parts of our economy where we have
24 affiliated unions that are struggling with the economy,
25 so with the component parts for high-speed rail, or for

1 the ports, or for vehicles such as Tesla, so I'm just
2 throwing that question out to you, Brian.

3 MR. MCMAHON: About 70 percent of the funds we
4 invest with our standard program monies go to different
5 aspects of the manufacturing sector relative to AB 118
6 investment. As I mentioned, we have invested into EV
7 manufacturers, and we're scoping a project with two
8 others. We are looking at smaller level manufacturing
9 for that program, as well. So ETP currently has and
10 certainly will maintain a strong emphasis on the
11 manufacturing sector, advanced manufacturing, and all of
12 the elements of the sector.

13 COMMISSIONER PETERMAN: Bonnie.

14 MS. HOLMES-GEN: Thanks, Commissioner. And
15 because I'm at the end, of course my comments will
16 reflect some of the discussion that's already occurred.
17 And first, I want to thank the Energy Commission again
18 for another excellent effort putting out this draft
19 report, and it seems like they come out faster and
20 faster, so I appreciate the hard work to get these things
21 done early in the year.

22 I have about six comments here, one, I think
23 that all categories could use a little sharpening in
24 terms of talking about the key goals that we're trying to
25 achieve in each category and the metric that we're using

1 to determine success. And I think the hydrogen category
2 is one good example, it's not always easy to get down to
3 this specificity, but in hydrogen with the hydrogen
4 fueling infrastructure that we're needing to get to 38 to
5 50 stations, you know, in these key locations in the 2015
6 timeframe, and it's very helpful to have that kind of
7 specificity and that metric with what we're trying to get
8 to. In this current timeframe, when we are looking at
9 reauthorizing, of course, these very important funds, I
10 think we need to be communicating as clearly as possible
11 about what we are achieving with these funds.

12 Second of all, just also wanted to comment on
13 the biofuel issue, this issue has been raised, the \$20
14 million, that's a large chunk without much specificity, I
15 would agree. From the Lung Association's perspective,
16 our goal has always been to promote the cleanest, most
17 sustainable fuels over the long term, and that certainly
18 applies to all categories, including biofuels, but it
19 would be helpful from our perspective to have more
20 clarity about what the priority is in this area. I
21 realize there is some discussion in the text about --
22 maybe the grading criteria gets to that, but clearly I
23 appreciate and agree with the issues raised by Scott and
24 biomethane clearly looks to have the attributes that
25 we're looking for in terms of long term sustainable fuels

1 and we would want to be promoting that.

2 Third, in terms of Plug-In Electric Vehicle
3 Infrastructure, I would agree that we would like to see a
4 little more in that category, especially since we're in
5 this very very important phase right now of gearing up a
6 zero emission in near zero emission vehicles, and the
7 critical nature of getting high numbers and high consumer
8 participation in buying these vehicles over the next
9 decade, so we can get up to the millions of vehicles in
10 the early -- in the 2020 timeframe.

11 And I wanted to ask because my next point is
12 about electric vehicle infrastructure and vehicle
13 incentives, I think it's come up a couple of different
14 times that we're not getting these funds to the San
15 Joaquin Valley, and I did want to just highlight that,
16 that is a concern, I think it came up in the ARB
17 discussion over the AQIP funding, also. So I would love
18 to explore some ways that we can get some of that, but
19 more of that funding into the San Joaquin Valley, of
20 course, that area does have some of the worst air
21 pollution in our state and is such a key concern in terms
22 of kids with asthma and respiratory illness. So I think
23 that would be an issue we would need to look at.

24 MR. CARMICHAEL: Bonnie?

25 MS. HOLMES-GEN: Yes.

1 MR. CARMICHAEL: Could I just note, the
2 biomethane-biofuel production, the sweet spot in the
3 state may be the San Joaquin Valley, so there is activity
4 happening there, not that there shouldn't be a lot more,
5 but that is one area where CEC is supporting good
6 activity is in the San Joaquin Valley.

7 MS. HOLMES-GEN: Okay, and that's very good and
8 I think we need to look at that across the categories of
9 projects. Thank you. And I guess last two comments
10 would be a lot of discussion about the hydrogen stations
11 and I appreciate and agree with Eileen's comments about
12 making sure that this program is supplemental to our
13 Clean Fuels Outlet Regulation and, in that regard, I
14 think it's very important what the timing is for getting
15 these stations on the ground that are being developed
16 through the current solicitation. And so either today or
17 some time, I'd like to get a little more specificity
18 about how certain are we about when we can get those
19 stations in, and can we get them in by 2015 because that
20 seems critical. And then, finally, on the E85 issue,
21 just wanted to join the concerns about taking a hard look
22 at this funding area given the business case issues that
23 have been raised.

24 And I guess the final final would be supporting
25 all the comments, again, about Zero Emission Goods

1 Movement. Yes, we need to have this funding support
2 heavy-duty and medium-duty electric applications, and it
3 would be helpful to have a separate section, I think, in
4 this report that talks about how these funds can support
5 the zero emission freight strategies that are being
6 pursued, especially in areas with the ports. Thank you.

7 COMMISSIONER PETERMAN: Thanks. This is
8 Commissioner Peterman. Before we move on to the Advisory
9 Committee members who are on the phone, just a little bit
10 about -- oh, I'm so sorry. You started, right? Okay,
11 that's why I got confused. Okay, we've got one more in
12 the room. Please, Steve, go ahead.

13 DR. KAFKA: All right. My name is Steve Kafka,
14 I'm with the California Biomass Collaborative. I want to
15 echo other Advisory Committee members' comments and
16 compliment the staff. But I want to be a bit more
17 specific about that. I know we heard several comments
18 about feedback that staff receives in the process of
19 developing these plans, and I think that the AB 118
20 program staff is in the unique position, really, to kind
21 of act as kind of a weather vane or census for a lot of
22 very innovative ideas and proposals that people come up
23 with. I know I hear about some of these things in the
24 areas that I work in, but I think that the staff here at
25 the Commission and in this program, in particular, has an

1 excellent -- has the opportunity to kind of hear about a
2 breadth of projects and distill their sense for that
3 feedback and public interest into an Investment Plan.
4 And I think that this plan, in fact, probably does
5 reflect that.

6 It looks to me very balanced and appropriate.
7 I think an Investment Plan has to be some kind of
8 compromise between what we would foresee as an ideal
9 future and the intermediate steps that we can take to get
10 from the current less than ideal future to that point, so
11 that a combination of approaches is important in terms of
12 both fuel diversity and supply. I don't see, even with
13 the most optimistic scenarios, Californians abandoning
14 liquid fuels for transportation, airplanes abandoning,
15 especially, liquid fuels for transportation, and other
16 uses. So a prudential judgment would be -- a good set of
17 prudential judgments in terms of investments would have
18 some emphasis on intermediate steps to get to the ideal
19 future and some things that stimulate what we at this
20 point in time judge to be that ideal future. But, of
21 course, we might change our minds over the next 10 years
22 about that, too.

23 A couple of other comments. I think with
24 respect to the biomass area and the reuse of biomass in
25 the state for fuels and for power, one of the things that

1 I think is increasingly clear to me is that part of the
2 benefits of biomass use for power aren't necessarily just
3 simply in the power of the fuels that are generated, it's
4 also in the remediation effects of prudent use of
5 biomass. We have lots of forests in California with way
6 too many trees that are subject to catastrophic wild
7 fire. We have unutilized biomass in landfills. We have
8 opportunities to utilize food processing waste in
9 innovative ways. We are underutilizing our dairy manure
10 resources. And so I think that, particularly if we are
11 going to develop criteria for funding in future
12 investment plans, and even considering proposals that
13 come forward, the degree to which we can use the use of
14 one resources to remediate, or solve, or direct our
15 attention to the remediation of a problem with actual
16 real public costs that might not have real market values
17 internalized is really important. And I think
18 particularly in the biomass area, that's very possible.

19 Another thing that we want to perhaps consider
20 is the fact that we don't do this very well yet, but the
21 possibility of integrating various alternative types of
22 energy supplies. It could be that in some cases biomass
23 and biogas power is useful as a supplement to solar
24 projects and facilities. There's all kinds of ways in
25 which wind power, solar power, geothermal power, and

1 biomass might be integrated and I don't think we've just
2 -- we haven't really opened the door to that yet. And we
3 might want to consider that for, if not this current
4 Investment Plan, future Investment Plans because it could
5 be just enough extra energy -- from a solar system, for
6 example -- to be able to generate biomass.

7 The other thing is we need to think a little
8 bit broadly about what manufacturing facilities and how
9 they might be integrated in these multiple sources of
10 feedstocks and inputs, and generate multiple products,
11 some of which might not be fuels or powers, some of which
12 might be bio-products, but also which substitute for
13 petroleum use. There's a lot of creative potential here.

14 Lastly, well, two more comments, one, someone
15 mentioned the ability to coordinate with PIER. Our group
16 right now is in contract negotiations with PIER to do
17 some additional work on biogas -- biogas cleanup, biogas
18 supply, for example, and those that work from the PIER
19 Program will definitely complement, I think, some of the
20 objectives, particularly in the biogas arena that's going
21 forward. But it certainly wouldn't necessarily
22 substitute for the investments that are contemplated in
23 the plan, that's not enough money. But it wouldn't be a
24 bad thing for the AB 118 program or the Commission as a
25 whole to think about kind of censusing its work and

1 thinking about synergies.

2 CHAIR WEISENMILLER: Obviously, one of the
3 things we're very cognizant of is that PGC was not
4 renewed, and so in terms of what happens with PIER, we'd
5 love to be able to coordinate, but as you know, it's not
6 -- there's nothing to coordinate.

7 DR. KAFKA: Well, PUC will have some -- may
8 have some future role in that, so that brings up the
9 Interagency Work Groups, and so on, which is an extremely
10 important thing, but a separate topic.

11 Lastly, I think Simon made some comments about
12 procurement of fuels and trying to stimulate the
13 procurement of fuels. That is an extremely fraught area
14 and difficult area; for instance, California isn't alone
15 in the alternative fuel legislative arena, but a
16 Renewable Fuels Standard at the Federal level is involved
17 and developed, has mandates for various alternative
18 fuels.

19 We've had this very difficult and unfortunate
20 experience of a lawsuit that was settled adversely from
21 the point of view of the Low Carbon Fuel Standard, that
22 where there hasn't been a harmonization between Federal
23 and State Procurement Programs, so I would not want to
24 see this very limited amount of investment money get tied
25 up in a kind of battle over what qualifies demanding, for

1 example, that a certain kind of fuel be required here and
2 getting caught up in what might be kind of a legal
3 morass.

4 MR. MUI: Steve, I just want to clarify --
5 we're a Petitioner as part of the State of California
6 that defend the Low Carbon Fuel Standard, so I don't
7 think it's quite settled yet on those issues, just to
8 correct the record. Second issue, I think what I was
9 talking about was not another RFS2 Program, which I also
10 was in part developing when I was at EPA, but actually
11 thinking about leveraging existing interest among fleets,
12 among the Department of Defense, places where you might
13 be able to aggregate enough demand from cities, from
14 state agencies, from companies, to provide some more
15 certainty around the advanced sustainable cellulosic
16 market, and that's kind of what I was suggesting. But,
17 you know, this is something that I think we'll need some
18 thinking through, but that was something that I think
19 could be helpful here.

20 DR. KAFKA: I agree with you that it would be
21 helpful, it's just a very technically challenging area
22 and it's been made more challenging by recent legal
23 developments, in my view. As you know, since you follow
24 the RFS2, the mandate for cellulosic fuels has been
25 revised downwards radically in each of the last three

1 years and will again be revised downward, so it's -- but
2 if there could be stability of demand -- and that's one
3 of the sad things about the lawsuit around LCFS because
4 LCFS provided a nice avenue for the development of
5 innovative fuels and incentivized the very lowest carbon
6 intensive fuels in a way that the RFS2 does not. So I
7 hope that gets resolved, but I don't want to see, I mean,
8 we would have to be very careful, I think, the staff
9 would have to be very careful.

10 MR. MUI: Yeah, I agree. Thanks.

11 COMMISSIONER PETERMAN: Let's move on. Scott,
12 do you have a quick comment?

13 MR. SMITHLINE: Very brief. Yeah, I've now
14 mentioned twice the importance of harmonizing these
15 expenditures with additional policies, our recycling
16 policies and AB 32, but frankly in my haste I failed to
17 elaborate and I just wanted to thank Steve for frankly
18 eloquently describing the importance of the
19 environmental, social, and economic co-benefits of
20 choosing certain fuels, so thank you.

21 COMMISSIONER PETERMAN: Great. So I want to
22 keep going. So in a second, I want to get to the
23 Advisory Committee members who are on the phone. After
24 that, I recommend that we take a 15-minute break and then
25 go through public comment. My recommendation is to push

1 through to end the meeting a little bit later than
2 planned, but then allowing people to go forward and have
3 their lunch and complete their afternoon. We have about
4 17 cards, people wanting to speak for public comment, if
5 there is anyone additionally who wishes to speak, there
6 are blue comment cards -- somewhere -- someone will raise
7 their hand and offer you one, and we'll take it from
8 there. So let's see, who is on the phone? Will, do you
9 want to speak next?

10 MR. COLEMAN: Sure, thanks. So I just have a
11 few comments, one, I just wanted to respond to -- I think
12 it was Tim's point about reviewing the advanced
13 technology applications. You know, I think that would be
14 a useful thing for the industry, I think, if there were
15 some open forum to be able to actually see what some of
16 the applications are, it doesn't have to obviously give
17 you all the details, but just who they are and then just
18 some avenue to follow-up with the staff. I do think that
19 would be useful. In terms of manufacturing -- I think
20 there was a point, there were some questions about
21 whether or not it's a useful thing in the context of the
22 current environment, and I think the reality is that a
23 lot is trying to be done in order to encourage
24 manufacturing to be built here in California. There are
25 definitely some high hurdles and road blocks in that

1 regard. And I do think more can always be done, the
2 question I have is around what the \$20 million gets
3 deployed to because it really is a drop in the bucket
4 compared to the total costs of even building a single
5 manufacturing facility here in California. So you have
6 to make sure that I think the capital is sufficient to
7 spur the need.

8 So the third, I guess in terms of
9 infrastructure, you know, having seen now four years of
10 the plan, I think we're now at the point where we can see
11 some of the results and patterns, and I think that's a
12 very useful thing. Thanks for pointing me to the Center
13 for support, having gone through that, you know, I think
14 I'm just trying to understand a couple things, so, 1) in
15 trying to understand the infrastructure allocation, to
16 Tim's point earlier, I think, given the high and near
17 term potential benefits of things like biofuels, I am a
18 bit concerned about the cuts there. And looking at the
19 hydrogen CO₂ benefits, if I do the math correctly, the
20 cost per gram of CO₂ reductions is quite high. It's much
21 higher than in other categories, and yet we are seeing
22 the dollars continue to be deployed pretty aggressively
23 towards the hydrogen infrastructure. So I'm concerned
24 about the fact that that category continues to take the
25 bulk of the funding. And that leads to a second larger

1 point because I think there may be plenty of good
2 explanations as to why that is, which is just that I
3 think that it seems like we now have the data to evaluate
4 these options in a side-by-side way in terms of the cost
5 of the reductions of CO₂ for each particular segment. But
6 in going through the benefits report, I still don't see
7 that. So, you know, the numbers are there, but it's not
8 set up in such a way that it's easy for us to evaluate
9 really what the cost per gram reduction potentially is
10 for a given program. And then, it's not easy to see how
11 those numbers, if you do some of the back of the envelope
12 calculations, are then carried through to this year's
13 plan or future plans. And I understand that there are
14 often other less quantitative reasons for seeding markets
15 and whatnot, I think Bonnie referred to the point around
16 hydrogen and needing to get to a certain critical mass in
17 terms of fueling stations, to get to a point where you
18 can see the market; and that's fine, but I think we'd
19 like to see those arguments in detail and what it is that
20 you then unleash in terms of private sector capital going
21 into this space from getting there because I think the
22 risk is that right now a lot of the allocations are
23 driven by a combination of gap analyses of some metrics
24 around the potential to reduce CO₂ and then also by the
25 stakeholder group needs. But I think we just have to be

1 wary of building a program to fill a perceived market gap
2 because sometime those market gaps are there for a
3 reason, and no amount of public capital will solve that.
4 And so I just think we need to be very wary of whether or
5 not there is sufficient capital; and in this program, if
6 this is the program to address the problem, to actually
7 get us to a reasonable point, or a point where we can see
8 those sectors take off.

9 You know, I think propane may or may not be an
10 example of that, I think it was mentioned that that
11 propane program as compared to the other natural gas
12 programs was not as readily received. And I guess I
13 would just be a little bit concerned if the objective is
14 to accelerate or expand the adoption of propane if, in
15 fact, the market is telling us that that is not of
16 interest. Now, there are reasons why it should be --
17 we're seeing increases in propane as a result of some of
18 the natural gas movement boom and whatnot, but compared
19 to some of the other natural gas programs, it may not be
20 as high a priority for folks who are thinking about the
21 cost of fuel going forward. So I just think we need to
22 be careful of that.

23 But the bottom line is that I personally would
24 like to see a clearer side-by-side comparison of
25 different categories and different uses of funds in terms

1 of the dollars in and the reductions, as a result. And
2 then it may be that those public dollars unleash a
3 certain amount of private dollars or additional
4 reductions as a result of those private dollars, I think
5 it is fine to factor that in, too. But the apples to
6 apples comparison would be very helpful, I think, from my
7 perspective.

8 COMMISSIONER PETERMAN: Great, Will. Thanks.
9 And this was the first Benefits Report, so I think staff
10 and the Commissioner appreciates your feedback, as well
11 as suggestions for improvements in further versions.
12 Justin Ward, are you on the line still?

13 MR. WARD: I'm still here.

14 COMMISSIONER PETERMAN: Would you like to
15 speak?

16 MR. WARD: Sure. I won't spend a lot of time
17 repeating what has already been said by Tom and John and
18 Tyson about hydrogen, but I did want to just make a note
19 that, you know, I'm really encouraged to see the
20 inclusion of the fifth operation and maintenance costs, I
21 think that could potentially be a barrier to keep
22 stations around for a long time, so I'm really supportive
23 of that and interested to see how far that's going to go
24 and, again, would offer up the California Fuel Cell
25 Partnership and myself, as well, to be a resource to help

1 work through new ideas to cover the O&M concepts.

2 And maybe, most importantly, I just wanted to
3 say thanks to the staff for their hard work, it is
4 amazing, I think Bonnie mentioned it, that you're getting
5 these Investment Plans out so much, so fast, and I think
6 the detail is very good, I do think this is a balanced
7 plan and I just wanted to give everyone a special thanks
8 for their big effort.

9 COMMISSIONER PETERMAN: Great. Mr. Norbeck,
10 did you have any comments in addition to the ones you
11 made earlier?

12 MR. NORBECK: Can you hear me?

13 COMMISSIONER PETERMAN: Yes.

14 MR. NORBECK: Okay, I'm having trouble with the
15 connection. Now, there was only one that I wanted to
16 comment on and that is that I would like to encourage
17 more of the lifecycle analysis that is being done, that
18 was just spoke of because in many instances I think we're
19 confusing a little bit with urban air pollution and
20 particulates, and global climate change with CO₂
21 reductions. And one of the ways of being able to do a
22 better understanding of that is to go through, look at
23 the whole lifecycle analysis -- for example, I love
24 Electric Vehicle, don't get me wrong, generating
25 electricity with coal-fired power plants imported to the

1 state, isn't going to be a way of reducing CO₂. And you
2 need to be able to understand how we're going to be able
3 to generate electricity from renewable sources a little
4 better. But other than that, I want to thank the
5 committee on the report and I unfortunately had to go to
6 another meeting, so I won't hear the other projects.
7 Thank you.

8 COMMISSIONER PETERMAN: Thank you. Ms. Baker-
9 Branstetter? Is Shannon Baker-Branstetter there on the
10 line from Consumer's Union? Okay, any other members of
11 the Advisory Committee on the phone who wish to speak?
12 Okay, John, you're chomping at the bit, so --

13 MR. SHEARS: No, I just wanted to -- because I
14 already said most of my piece, just again didn't have a
15 chance to thank the staff and the Commissioners for --
16 I've said this several times at past Advisory Committee
17 meetings where, you know, we have a program that includes
18 the kitchen sink, very challenging program to manage and
19 to address all stakeholder concerns and needs, you know,
20 I viewed this draft as a draft that was meant to generate
21 discussion around the issues and, you know, certainly
22 agree upon the specificity -- need for more specificity,
23 but you know, I'll be working -- plan on working with
24 staff more to help develop some of these numbers,
25 especially on things like EV charging infrastructure,

1 what numbers, what better numbers, whether the -- I don't
2 want to just say, "Oh, it should be more," but I would
3 like to work with the Collaborative and relative
4 stakeholders like CalETC, you know, to see what the needs
5 really are given the needs in the rest of the program.
6 But certainly, it's a very important area that we need to
7 address.

8 And just in terms of things on the hydrogen
9 side, you know, I appreciate Will's observations and I
10 think they're all very good, but again, part of the
11 program is this managing near, mid and long term goals,
12 you know, and I'd just like to riff off of Simon's
13 observations about new fuel production facilities and,
14 you know, the first of kind plants vs. second of kind
15 plants, and we're sort of trying to do the same thing
16 with hydrogen here in California.

17 And work, research looking at development of
18 scenarios for transportation, not just here in
19 California, but nationally and internationally
20 consistently not only look at electricity but, you know,
21 show that there's a need for hydrogen to play a role to
22 meet our longer term transportation, and certainly for
23 the Air Districts and the, you know, considerable numbers
24 of folks in California with asthma, these technologies
25 are going to be critical going forward to the point

1 where, you know, South Coast is glancingly talking about
2 the concept of a no combustion zone, but they're so
3 desperate. So I just want to make sure that we keep our
4 eyes on the fact that we have near, mid and Long term
5 goals to achieve with this program.

6 COMMISSIONER PETERMAN: Great, thank you. So
7 we're going to -- one second.

8 CHAIR WEISENMILLER: I was just going to take a
9 second. I wanted to again thank the Advisory Committee
10 for their advice this morning; we both appreciate that.
11 And certainly, one of the things as we struggle -- and it
12 would be good to focus on in your comments -- is just,
13 obviously, this program is not the only thing going, you
14 know, there are pretty significant activities on the
15 Federal level, private industry level, certainly the Air
16 Board has a number of programs. And we need to make sure
17 that we are complementing those. So, particularly on the
18 charging stations, one of the things I want to make sure
19 is, given the evolving PUC rules on that, and the Air
20 Board rules, that at some point there's only -- we can
21 push things and then the regulations take effect and we
22 need to be stepping back. So again, help us make sure
23 that we are complementing the other State Programs and
24 activities, State, Federal (inaudible). So thanks again.

25 COMMISSIONER PETERMAN: So we're going to take

1 a break until 12:25 and then we will get back on the
2 record and we'll do the public comment and get any final
3 last words from staff, as well as committee members. If
4 you have to leave us now, comments would be appreciated
5 and can be incorporated if you submit them by February
6 24th, which is two weeks from today. Okay, see you at
7 12:25. Thanks.

8 (Recess at 12:07 p.m.)

9 (Reconvene at 12:32 p.m.)

10 COMMISSIONER PETERMAN: All right, we're going
11 to get back on the record now and start with public
12 comment -- in three minutes -- oh, no, sorry, correction,
13 we ask that you keep your public comments to three
14 minutes or less. We're not keeping a second watch here,
15 but I will ask you kindly at some point to wrap up if it
16 goes beyond that.

17 First, in terms of public comment, I would like
18 to ask Matt Miyasato from SCAQMD to speak -- oh there
19 you --

20 MR. MIYASATO: Thank you, Commissioner
21 Peterman. It's a pleasure to be here, Chair
22 Weisenmiller, good to see you again. For the record,
23 it's Matt Miyasato from the South Coast Air Quality
24 Management District, and just for the record, we hate the
25 acronym SCAQMD, so...

1 COMMISSIONER PETERMAN: I was trying to say it,
2 I said, "Wait a minute, I never actually had to say it."

3 MR. MIYASATO: It sounds like a dirty doctor or
4 something, so... But I just have a few slides that I'd
5 like to present at the Committee's indulgence, and
6 clearly, as you look forward to the success of the
7 program, I think it's also important to look back at the
8 successful collaboration the CEC and the AQMD have
9 enjoyed and, Pilar, if you go to the next slide.

10 I simply wanted to list a couple things here.
11 Our collaboration dates back to the methanol days, if you
12 remember that, that alternative fuel. We worked with
13 ARB, CEC, and the AQMD, and we had a very successful
14 deployment of vehicles, and we continue that effort with
15 heavy-duty natural gas engine development infrastructure
16 for all of the alternative fuels, natural gas, hydrogen,
17 and even Electric Vehicles. And we would like to
18 continue that opportunity. One thing that is noteworthy,
19 President Obama just visited the Natural Gas Fueling
20 Station in Las Vegas, which was supported by all of the
21 Federal Government, the State Government, and the local
22 government here so that the State of California and the
23 regional agency, the South Coast AQMD. So it's important
24 that we keep that type of collaboration going.

25 If you go to the next slide, what I'd like to

1 comment on is that we submitted our draft research
2 development and demonstration and deployment program to
3 our Board in October of 2011, just recently, and I wanted
4 to highlight some key areas where we think there's very
5 good overlap and complimentary programs, and we think it
6 aligns very well with your program here.

7 I simply want to highlight three things. In
8 particular, electric vehicle infrastructure, hydrogen
9 fueling infrastructure, and also electric and hybrid
10 technologies. If you would go to the next slide.

11 I wanted to point out, obviously your program
12 is much better funded than ours, and this shows the
13 overall magnitude and these four different categories.
14 But if you go to the next slide, if you look at the
15 percent in terms of the total pie, as it were, for the
16 funding you can see that our resources and privatization
17 are much aligned in the same types of areas; in fact,
18 we're more focused on electric drive technologies, and
19 natural gas, and biomethane production than perhaps you
20 are, but we share a common interest in hydrogen fueling
21 infrastructure and also training and technology transfer.
22 And that's simply to show you that we believe we're very
23 well aligned with you in many of these different areas.
24 So if you would go to the next slide.

25 What I wanted to point out if that we do have a

1 history of collaboration, we believe our programs are
2 highly collaborative and synergistic, and I'd like to
3 make two comments, one is to offer our expertise. So I
4 know that Pat mentioned the potential for block grants to
5 Air Districts, we would welcome that, we would welcome
6 the competition to apply for those; but we do have the
7 expertise to handle those types of contracts, we have
8 technical expertise, we've had a research and development
9 program for over 20 years, our incentive program is very
10 robust. In fact, over the last several years, almost a
11 quarter of a billion dollars of contracts that we've
12 executed through our agency, so we have the
13 infrastructure, the staffing to do those types of
14 contracts.

15 But more importantly -- if you would go to the
16 next slide -- what I wanted to comment on is emerging
17 opportunities and that's something that your staff had
18 asked us to provide some comments on. I think Pat Perez
19 mentioned it very eloquently, is that there are
20 opportunities in technology development that don't fit
21 the boundaries of -- and then Jim mentioned
22 bureaucracies, the timing windows, the opportunity to
23 strike while there are co-funding opportunities, and a
24 hallmark of our program has enabled that flexibility to
25 occur and we welcome the State's participation in these

1 types of opportunities. So, if you would go to the next
2 slide, I'd like to highlight just a couple of those. One
3 is a catenary, or trolley truck. In fact, the CEC
4 awarded this technology to a technology provider, I guess
5 it was about two years ago, we also were going to execute
6 an award, that technology provider, for reasons likely
7 due to the economic downturn, refused the award, but now
8 the same technology has reemerged with a different
9 provider and we'd like the opportunity to have the Energy
10 Commission partner with us, the ports, and other entities
11 to develop that project for goods movement in the region.
12 This would be a truck that operates all-electric and
13 catenaries, zero emission technology can come off the
14 catenary, and then they use a diesel hybrid, a natural
15 gas hybrid, or other type of technology to provide the
16 transport of the goods off of a dedicated roadway. I
17 think it's a very flexible and interesting technology
18 that we should be developing.

19 And then the next slide is other opportunities
20 that exist for the retrofit of locomotives to run all
21 electrically, zero emissions, there is a wealth of
22 different technologies. And as Tim Carmichael noted,
23 these are potential -- I can't recall the phrase that Tim
24 used, but there -- high risk potential, but they should
25 be on the table and we would like to engage the Energy

1 Commission to help us with these, and several of us --
2 catenary for freight movement, a battery tender car
3 instead of a coal tender car, for example, and a train or
4 even a tender car with a pantograph. So my final slide
5 is simply we believe there are strong opportunities for
6 synergy between our programs and leveraging these types
7 of different technologies. We would offer our services
8 if you feel that is appropriate, and then we would
9 certainly encourage you to keep the emerging
10 opportunities funding pot open, if not expanded, to take
11 advantage of opportunities at the Air Districts and also
12 at the Federal level. So, thank you.

13 COMMISSIONER PETERMAN: Thank you very much.
14 We have someone on the line, Jeff Serfass, from the
15 California Hydrogen Business Council, who has to step off
16 at 12:45, so I'm going to ask you to open his line for
17 his comments.

18 MR. SERFASS: Well, thank you very much. Can
19 you hear me?

20 COMMISSIONER PETERMAN: Yes.

21 MR. SERFASS: Okay, thank you. As past
22 President of the National Hydrogen Association for 22
23 years, I'm really pleased to be representing the
24 California Hydrogen Business Council and you probably all
25 know that it's an organization of fuel cell

1 manufacturers, hydrogen producers, manufacturers of
2 hydrogen equipment. And I must say, we're very pleased
3 with the \$11 million that is allocated to hydrogen
4 infrastructure; it is of course necessary, there's been a
5 lot of good discussion about comparative analyses, but
6 the fact of the matter is that, as the ARB has reported,
7 the state needs a mix of fuel cell and Battery Electric
8 Vehicles, and needs that to represent 100 percent of new
9 vehicles in the next 30 years, or beginning in 30 years,
10 so it's very important that we proceed. The \$11 million
11 is a significant help, more will be needed as has been
12 discussed, and we look forward to working with you to
13 help find the right plans that combine public and private
14 money, and again, I thank the Commission -- I thank staff
15 for a very thorough report.

16 COMMISSIONER PETERMAN: Great, thanks. Is
17 there anyone else in the room representing another
18 regulatory agency or entity, or on the phone that wishes
19 to speak? Okay. Then we'll get back to the blue cards.
20 Next, we'll have Nick Lapis with -- pardon?

21 MS. BRADSHAW: Excuse me, I'm sorry. May I
22 make a comment?

23 COMMISSIONER PETERMAN: Sure. May I ask who is
24 speaking?

25 MS. BRADSHAW: This is Beverly Bradshaw from

1 Best, Best & Krieger. Our law firm represents Victor
2 Valley Wastewater Reclamation Authority.

3 COMMISSIONER PETERMAN: Okay, great. Well, we
4 are going through the people who are offering public
5 comment in the room now, but we'll take down your name
6 and call you when we return to those who are on the
7 WebEx. Right now, I'm just asking for those representing
8 various regulatory agencies.

9 MS. BRADSHAW: Thank you.

10 COMMISSIONER PETERMAN: Thanks a lot. Nick.

11 MR. LAPIS: Hi, good afternoon. I'm Nick Lapis
12 with Californians Against Waste. I appreciate the staff's
13 work on this and getting the plan out early and sharing
14 it with the public, and we appreciate providing input on
15 this plan as we have previous plans going back a few
16 years.

17 We share CalRecycle's concern about removing
18 the line item for pre-landfill biomethane. And there are
19 several reasons for that. First of all is the issue that
20 I think comes to a lot of people's minds, I won't delve
21 on it, is the issue of investment uncertainty for these
22 technologies. This agency has done a lot to promote
23 anaerobic digestion. We've funded several different
24 facilities around the state. That's been great. But we
25 can't now get rid of that funding, it sends a very bad

1 message to the market. And not having a separate line
2 item there sets a very bad message to developers,
3 investors, and others.

4 But I would also like to say, it's very
5 important to separate -- in addition to separating pre-
6 landfill biomethane from other biofuels, it's very
7 important to separate pre-landfill biomethane from
8 landfill biomethane. And the reason for that is that,
9 first of all, it's possible that the funding for the pre-
10 landfill biomethane might get overwhelmed by other
11 biofuels, but there's also the issue of the symbiotic
12 relationship between funding landfill projects and
13 funding pre-landfill biomethane projects. If you just
14 fund landfill gas to fuels efforts and you do not fund
15 alternatives for landfilling the same material, you end
16 up in the scenario where the landfill gas that's
17 generated is very valuable and there becomes an incentive
18 for putting more organics into the landfill. The net
19 result there is that, not only do we not have the
20 benefits of diverting material to anaerobic digesters,
21 but we also have a potential increase in greenhouse gases
22 on the landfill side from increased landfilling of
23 methane generating organics.

24 So, again, it's crucial that pre-landfill
25 biomethane be funded as a separate line item as it was

1 last year. I know that, prior to that being included as
2 a separate line item, most of the funding in this
3 category has gone to landfill projects, which is why this
4 is so pertinent.

5 A couple more points. Tim Carmichael raised
6 the issue of overall funding level for the biofuel
7 production category. I completely agree with that
8 comment, it needs to be increased. He also mentioned the
9 issue of the interface of the AB 118 funding with LCFS,
10 and some of the issues with potentially projects that
11 might be in both categories. Again, I'd like to echo his
12 comments. This is not a compliance requirement on
13 biofuel production facilities under the LCFS, so there's
14 really no overlap with the AB 118 program, and neither
15 program has an additionality requirement, so it's
16 important that we have both options available. If you
17 look at the developers pursuing pre-landfill biomethane
18 projects, they're definitely not doing it to comply with
19 LCFS, they're just producing a low carbon fuel. And just
20 to note, we've been looking at the potential carbon
21 intensity of new digester-related pathways under the LCFS
22 and you are talking about a fuel that is so far lower
23 than any existing low carbon fuel that we might
24 potentially be going into the negative territory in terms
25 of carbon intensity because this is a material that, when

1 landfilled, when handled any way other than at a
2 digester, produces emissions. So by digesting, we're
3 actually reducing emissions. Thank you.

4 COMMISSIONER PETERMAN: Thank you. Next, we'll
5 have Andreas Klugescheid, perhaps, BMW Group. Pardon the
6 pronunciation. Please clarify, correct.

7 MR. MCKINNEY: Commissioner, if appropriate --

8 COMMISSIONER PETERMAN: Yes, please. I'm
9 sorry, go ahead.

10 MR. MCKINNEY: Staff has a clarification on the
11 issue about -- if that's appropriate here?

12 COMMISSIONER PETERMAN: Yes, of course.

13 MR. MCKINNEY: I think there's been a slight
14 misinterpretation of this particular policy issue in this
15 Investment Plan for the preference, say, you know, pre-
16 diverted MSW waste streams vis a vis landfill gas. So
17 the existing Commission policy on that is that pre-
18 diverted MSW waste streams are eligible, landfill gas
19 projects are not eligible. In the first Investment Plan,
20 which covered two fiscal years, it was open and we had
21 good awards on both fronts; High Mountain Fuels has a
22 good land fill gas project in Ventura County, CR&R Perris
23 has an excellent MSW diversion project going to anaerobic
24 digestion in that area. In fact, most of our awards are
25 to anaerobic digestion of different parts of the waste

1 stream, and we just have one big landfill gas award, so
2 just to clarify the record there.

3 COMMISSIONER PETERMAN: Question, Scott? Go
4 ahead.

5 MR. SMITHLINE: Thank you. That's a very
6 helpful clarification. I actually was under a
7 misimpression, so that's very important and very helpful.
8 And I would say that we would actually support that
9 interpretation with a caveat that I do think that there
10 is a significant amount of waste in place in place in
11 landfills, and when we get a handle on diverting the
12 organic waste from landfills, there's going to be enough
13 left there that I don't want to take funding landfills
14 off the table; and permanently, I don't think that's a
15 good idea. I think it's, as I said earlier, an issue of
16 order of operations. So, thank you.

17 COMMISSIONER PETERMAN: Andreas. Thank you for
18 waiting.

19 MR. KLUGESCHIED: It's Andreas Klugescheid and
20 even Germans have issues with that name, so no worries
21 about it. I just want to give a quick comment. First of
22 all, thinking as many others have done before, staff and
23 the Commission, to come up with a plan also thinking the
24 State of California actually being willing to pay for
25 fuel infrastructure, which is certainly not something

1 that comes as a no-brainer, given the budget situation,
2 so that is a good thing, really. And my brief comments
3 go into the world of standardization, which is of utmost
4 importance for common effectualism and specifically DC
5 charging, you know, we have, as you probably know, two
6 systems out there, one is CHAdEMO, the other one is the
7 combo system, combo being supported by major
8 manufacturers like GM, like Ford, like BMW, Daimler
9 Volkswagen, and I just want to make sure -- I'm more than
10 happy to work with staff in that respect -- that DC
11 charging funding, if it comes to that point, is going to
12 be spent in systems that are future oriented and cater to
13 both worlds, actually. Same goes for the hydrogen
14 filling stations, 5,000 PSI, 10,000 PSI, and here we have
15 a substantial interest, as well, to make sure that all
16 technologies are represented in that field and, again, we
17 are happy to work with staff to further go into details
18 here. That's my comment.

19 COMMISSIONER PETERMAN: Thank you. Okay, go
20 ahead.

21 MS. TUTT: Andreas, one question for you. When
22 you say the funding would go, are you saying that for
23 CHAdEMO and for the SAE Standard, that it would go to
24 other of those and not some other standard? Or what --
25 for DC fast charging, what was your comment exactly

1 regarding fast charging?

2 MR. KLUGESCHEID: Well, the DC fast charging
3 that we see right now is mainly catering to the CHAdeMO
4 system, which is Nissan Mitsubishi, right?

5 MS. TUTT: Yeah.

6 MR. KLUGESCHEID: And the common effectualism
7 that I was referring to earlier on, BMW, GM, Ford,
8 others, are working on a system that is called Combo,
9 which also goes into the world of DC fast charging, and I
10 think it's important to make sure that we do not pick
11 winners and losers --

12 MS. TUTT: Good.

13 MR. KLUGESCHEID: -- before we have cause in
14 the world which is going to --

15 MS. TUTT: That's what I was hoping you were
16 saying. Thank you.

17 MR. KLUGESCHEID: Okay. No silver bullets,
18 that's another favorite one, right?

19 COMMISSIONER PETERMAN: Thank you. Next, we'll
20 have Mary Solecki --

21 MR. MUI: I'm sorry, could I just clarify on
22 this issue a little bit? You know, certainly -- sorry,
23 Andreas, I made you come back -- you know, I would love
24 to see a world where the auto industry can figure out the
25 standard and make a decision; but, in the current world,

1 is there an opportunity to have a system that could
2 potentially do both, or be converted, once an SAE, once a
3 single -- hopefully single -- standard is developed for
4 these chargers?

5 MR. KLUGESCHEID: Yeah. So the first comment
6 is the car industry actually is working together to
7 figure out what we can do in order to avoid such a battle
8 of systems, if you like, to go a little bit over the top
9 here. The other answer is that companies like, for
10 example, AVB, are coming out now with information of
11 communication that they can actually can provide charging
12 spots that can do both. So there is a solution to that
13 in the interim term, right? And we'll see, the market
14 will basically decide what will survive, so to say, maybe
15 both systems, most probably only one, and which one we'll
16 see. But there is a transitional phase that can be
17 covered potentially by charging spots that provide both
18 systems with juice.

19 COMMISSIONER PETERMAN: Great. Anyone else --
20 anymore questions for Andreas? Okay, good. Mary
21 Solecki, you're next.

22 MS. SOLECKI: Hello, good afternoon. Mary
23 Solecki with E2. I'm here to talk about a fuel off take
24 agreement that E2 is proposing and we have submitted this
25 as a public comment under the IEPR, so if you would like

1 to read more details, then it is posted on the Web. We
2 are currently in the Research and Development stage with
3 this, we're going to have a proposal to you all sometime
4 in the next month or two. Right now, we are submitting
5 this concept for your thoughts and review and we'd love
6 to hear some feedback from you all.

7 What we're proposing is a state-run, fuel off
8 take agreement where the State purchases -- State
9 agencies aggregate their demand for fuels and the State
10 can specify under this proposal, or under the RFP
11 process, the types of fuels that they are demanding,
12 whether that be ethanol, drop-in gasoline, drop-in
13 diesel. And we're looking to aggregate up to 100 million
14 gallons per year from various State institutions. And
15 so, to reach this number we're looking to not only
16 Department of General Services, but we're also looking
17 towards school districts, towards cities, municipalities,
18 counties, and more.

19 We're doing a lot of heavy lifting here to try
20 and get all of these different public institutions on the
21 same page as far as what could be a workable, feasible
22 RFP for all of these different agencies. Where this
23 applies to AB 118 and you all is we are examining
24 different ways to possibly use AB 118 to help with this
25 program. This program will provide a bankable contract

1 that a fuel provider could use to take to a bank and
2 receive the debt financing they need to scale up and
3 create a fuel production facility.

4 And so we have a few different concepts that
5 we're looking at, first of all, we started with the idea
6 of buffering the price premium, if there is any sort of a
7 price premium between the cost of these low carbon fuels
8 vs. where OPIS is trading, then we could potentially use
9 some AB 118 funds. The downside of this idea is that
10 this potentially is a limitless cost, and so we don't
11 think that that's a workable proposal, so we're looking
12 at ways we could put some sort of a price ceiling on that
13 idea. Alternatively, we would propose covering some of
14 the contract administration process through the AB 118
15 funds, and providing some support towards helping get
16 these different public institutions on the same page for
17 these fuel purchases.

18 We'll be getting a proposal to you all very soon; in
19 the interim, I want to just pose that question to you all
20 -- what is a limited financial incentive that we could
21 provide to fuel providers with a maximum exposure? We
22 think that we could provide incentive for multiple
23 different fuel production facilities built under a
24 contract like this in the neighborhood of five to eight,
25 possibly as many as 10 different facilities, and we would

1 like your support and thoughts as to how we can reach
2 this. Thank you.

3 MR. SHEARS: Just a question.

4 COMMISSIONER PETERMAN: Yes, John, quick
5 question.

6 MR. SHEARS: So by proposal, you're basically
7 saying that you're submitting a concept for a program
8 element under AB 118? Or this is E2 submitting a
9 proposal and response to an anticipated Request for
10 Proposals?

11 MS. SOLECKI: Our proposal is separate from AB
12 118 in that this would be a contract run by the State of
13 California. The linkage to AB 118 would be for some
14 portion of support for it. The entire program would not
15 be under AB 118 at all. This is simply trying to make
16 that linkage that Simon queued up earlier, that linkage
17 between supply and the demand side.

18 COMMISSIONER PETERMAN: Great, thank you.
19 Next, we'll have John Clements.

20 MR. CLEMENTS: Good afternoon, John Clements,
21 Director of Transportation, Kings Canyon Unified School
22 District located in the heart of the San Joaquin Valley,
23 Central Valley. My hats off and praise to Ralph for his
24 outstanding comments earlier. I look up to him as the
25 pioneer of EV, and if it wasn't for his leadership and

1 guidance, and then working with the Energy Commission in
2 the early 1990's with AB 35, and having CNG and methanol,
3 and early advanced diesel technology experience, we
4 wouldn't be where we're at today, where I wanted to
5 mention to Bonnie, who is stepping back in the room,
6 we're receiving because of the experience and the risk
7 taking that Ralph has taken, and the experience with AB
8 35, we've gained enough experience and knowledge to work
9 directly with manufacturers to receive the first
10 production model Alt ZEV School Bus in the United States.
11 So, thank you both.

12 We're in support of the Centers for Alt Fuels
13 and Advanced Vehicle Technology. We had the privilege of
14 meeting with you and your associate there several months
15 ago at the Capitol and explaining that we have a Central
16 Valley Transportation Center by where what we've
17 discovered through our own experience is -- and Ralph is
18 absolutely right -- some of our neighboring school
19 districts and even our cities are not taking those risks
20 to experience the clean fuel technologies and vehicles
21 that are out there because they're afraid, they don't
22 have the money or the experience. And through the
23 Center, we believe we can partner with our local
24 community and have an existing JPA, have property, have a
25 local community college that wants to partner with us

1 through workforce development, provide a location where
2 alternative fuels are available to our immediate
3 neighbors and public municipalities and school districts,
4 and also have a center by where we can train the next
5 generation of green yellow bus technicians.

6 We were just last week awarded nearly half a
7 million through AQUIP through our friends at ARB to get
8 the next second and third all electric school bus in our
9 Central Valley, which we'll share with our neighbors
10 throughout the Central Valley and Northern California
11 over the next two-year period in a demonstration project.
12 AQIP HVIP funds have also provided us with the next five
13 hybrid electrics, of which two have arrived, and the next
14 three will arrive in the next few weeks to Kings Canyon
15 Unified, and they'll be part of that demonstration, as
16 well.

17 So once again, I just wanted to say thank you
18 for having that Center for Alternative Fuels and Advanced
19 Technology item listed on there. While we hope that that
20 number at some point may be greater than \$3 million, we
21 appreciate the fact that we're already on the previous
22 Investment Plan for Electric Charging Infrastructure, the
23 only in the Central Valley, and also some additional
24 infrastructure money for CNG, which we're going to
25 combine with CMAC funds and hopefully some local Air

1 District funds in the near future to at least drive a
2 stake in the ground and get our project started. So,
3 again, thank you. We're interested in some brick and
4 mortar funds to start our tech center for this and, at
5 that point, I'll conclude and I'll pass out some handouts
6 showing to your committee our project and more
7 information about the electric bus.

8 COMMISSIONER PETERMAN: Thank you. Next, we'll
9 have Bruce Balfour.

10 MR. BALFOUR: Okay, so Commissioner Peterman,
11 members of the Advisory Committee, thank you for this
12 opportunity to comment. My name is Bruce Balfour and I
13 work for Sandia National Laboratories in Livermore. As
14 part of my business development role at Sandia, I manage
15 a public private partnership aimed at supporting young
16 companies that are developing the advanced transportation
17 technologies. This nonprofit partnership is known as i-
18 GATE, Innovation for Green Advanced Transportation
19 Excellence -- you know I've had a few questions about
20 that today.

21 Anyone who has ridden in a car or truck in the
22 last 30 years has experienced better gas mileage,
23 increased performance, and reduced emissions because
24 Sandia National Laboratories worked with private industry
25 to increase engine efficiency. Long haul trucks save

1 diesel fuel every day because air flows more smoothly
2 around truck bodies due to advanced computer models
3 developed by Lawrence Livermore National Laboratory,
4 we're across the street from each other. Part of i-
5 GATE's role is to help small businesses gain access to
6 researchers or technologies at these labs, that can help
7 them solve their own technology development problems.

8 In 2010, i-GATE was designated as one of the
9 first six State of California innovation hubs, or iHUBS,
10 by the Governor's Office of Economic Development, now
11 known as SCOPES. The iHUB is administered by the City of
12 Livermore, but our partnership covers 10 cities, four
13 counties, and includes over 40 other industry,
14 government, academic, and investment partners. Since i-
15 GATE opened its Livermore technology incubator in June of
16 2010, which you attended, we have worked with our
17 partners to support young companies with office and lab
18 space, mentoring, business planning, seminars, access to
19 investors, and educational programs to help them build
20 their businesses. We're also able to leverage or broaden
21 network partners to create networking collaboration and
22 technology demonstration opportunities for our small
23 business clients. We currently work with seven client
24 companies, engaged in electric vehicle, fuel cell,
25 battery, and ultra-light rail technologies. And we

1 continue to grow, despite limited funding.

2 I believe you all have the program interview --
3 overview -- i-Gate has created in collaborative incubator
4 space that can house several small technology developers,
5 while providing them with intensive support to help them
6 grow quickly. Small companies can spend up to three
7 years in our program. Our academic partners supply us
8 with interns and student teams who provide additional
9 resources to our clients. We continue to expand our
10 efforts at integrating vehicle technology development
11 with workforce training efforts, knowing that we also
12 need to train individual technicians, as well as company
13 management to create the workforce of the future.

14 With all this in mind, i-Gate supports the
15 CEC's intent to establish funding of Centers for
16 Alternative Fuels and Advanced Vehicle Technology. This
17 will help to accelerate the commercialization of new
18 vehicle technologies, while also building an integrated
19 workforce that can help to grow small businesses in
20 California. I want to thank the Commission and the State
21 of California for the leadership it has demonstrated with
22 AB 118 and this program, with the awareness that energy
23 security is also national security. We also appreciate
24 the assistance provided by the CEC staff over the last
25 few months. I've been working with Darcy Chapman for the

1 last couple of months, recently, on contract with ETP to
2 support efforts such as fuel cell technician training,
3 advanced machine skills, and a variety of other things
4 that i-GATE is involved in, as well. Thank you for your
5 time.

6 COMMISSIONER PETERMAN: Thank you. Next, we'll
7 have Catherine Dunwoody.

8 MS. DUNWOODY: Thank you very much,
9 Commissioners and members of the Advisory Committee. I
10 want to start off by thanking the staff for all the great
11 work we've been doing together to better understand the
12 hydrogen needs and to make sure that we're continuing to
13 support in an appropriate way. I just want to say that
14 \$11 million in this current Investment Plan is really
15 important to continuing the growth of the infrastructure
16 in meeting our goals that we've laid out. And early on
17 in these Advisory Committee Meetings, you know, hydrogen
18 was really challenged to show how can we move away from
19 public funding towards private investment, and we've
20 taken that charge very seriously, as you've heard from
21 many of the discussions around the table, we've been
22 doing a lot of work with our partners to look at the
23 models for financing the early hydrogen infrastructure.

24 And the cash flow modeling that you've heard
25 referred to today shows clearly that hydrogen can be a

1 profitable business. The challenge is really ensuring
2 that the coverage of stations for the early network is
3 there, so that the automakers can launch the commercial
4 market with volumes of vehicles because, as we all know,
5 people won't buy cars unless they know they can get
6 fuels. And this is where the public funding is really an
7 essential activation to get that market going, and I
8 think that the discussion about adding some flexibility
9 to look at ways that operating and maintenance costs can
10 be covered in the early years and the support businesses
11 that may have the less profitable locations, I think
12 that's a really important thing to explore and we're
13 really happy to work with the staff to come up with some
14 innovative approaches that will be able to support those
15 businesses.

16 I think, also, it's important to continue
17 looking at station technology, for example, for renewable
18 hydrogen, and also for stations that are increasingly
19 capable to meet a higher volume of vehicle throughput,
20 so, for example, faster fueling, more cars per hour going
21 through the station. So these kinds of things are not
22 always the lowest cost options for the station
23 technology, but they are really important to meet our
24 public policy goals on renewables, as well as to meet the
25 commercial market growth. And I think, through the PONS

1 that you issue, you can establish criteria that will help
2 encourage those types of applications. With regard to
3 station count, we've had some discussion about that. I
4 just want to make sure we're all keeping in mind the fact
5 that some of the stations that are currently operating as
6 public stations today, we actually anticipate we'll
7 either close or we'll not necessarily be oriented to
8 retail fueling needs, and so may require upgrades. And
9 some of the analysis that's been done and is referenced
10 in the Investment Plan also relates to only the early
11 market regions, I think this was referenced earlier
12 today, like in Southern California, for example, there
13 was an analysis of the 31 to 49 stations for Southern
14 California from a UCI analysis, and I just want to make
15 clear that we're looking right now through our partners
16 at the University at the entire State of California and
17 the needs for that early network, and that should be
18 available very soon.

19 And then, lastly, I just want to say I'm really
20 pleased to see the potential for maybe funding some
21 community hydrogen readiness, and this is an area that
22 the partnership has been very active in over the years,
23 but as we grow the network, you know, the demands are
24 going to quickly rise as communities become more engaged
25 in this. And I think if there is a way to support

1 grassroots efforts, as has been done with the Plug-In
2 Collaboratives, those then seem to be really taking off
3 and being very successful, I think it's wise to look to
4 doing the same thing for hydrogen. So, thank you very
5 much. And I would be pleased to answer any questions.

6 COMMISSIONER PETERMAN: Great, thank you. Matt
7 Horton.

8 MR. HORTON: Good afternoon, Commissioners and
9 members of the Advisory Board. I'm Matt Horton, I'm CEO
10 of Propel Fuels and I've got a lot to cover, so I'll try
11 to be quick. Let's see, just quickly, Propel is a
12 renewable fuels retailer, we're focused on providing
13 consumers with choices beyond conventional fuels today.
14 And I'm going to talk about one of the fuels we offer
15 today, I'm going to talk about Ethanol at retail. We do
16 also have biodiesel blends at all of our locations in
17 California today. But I know there is a lot of question
18 about what's going on in the trenches with Ethanol.

19 So I'll start, 2011 was actually a very
20 successful year for Ethanol retailing in the state. I'll
21 speak from our own experience first. And what I'd like
22 to say is, you know, we've looked at our own stations,
23 the very first ones we opened here in Sacramento
24 experienced about a 30 percent growth in Ethanol volumes
25 year over year, so that was a very good showing. Our

1 company increased about 300 percent the amount of Ethanol
2 we sold in 2011 over 2010, so again, a pretty good year
3 there. You know, from our view, as we look at all the
4 fuel types that we can deploy at our stations, Ethanol --
5 high blend Ethanol continues to be one of the most
6 promising that we see.

7 There really are four keys to the success that
8 we've seen in 2011 and that we think will be important
9 going forward, the first is growing consumer awareness
10 and interest in the category. I'm proud to say we've
11 actually got over 10,000 individual consumers in
12 California that are fueling with us, buying high blends
13 of Ethanol today, so that's been great validation for us
14 in terms of the business opportunity. Additionally,
15 those consumers are fueling on average about 75 percent
16 of the time with us, so once we convert somebody over,
17 they don't tend to go back to gasoline very often.

18 When we open a station, we get somewhere in the
19 neighborhood of 400 to 500 customers making that switch
20 right away, so very quick impact, a lot of consumers
21 switch over to the high blend Ethanol and stay with it.
22 The great thing is we're seeing good volumes on only
23 about 15 to 20 percent market penetration at these
24 stations, so we've still got a lot of growth opportunity
25 with consumers as they become more aware of the benefits

1 of using Ethanol fuels.

2 The second -- Jim McKinney referenced this a
3 little bit ago about vehicle availability, and we don't
4 hear as much buzz about Flex Fuel Vehicle as we do about
5 some other vehicle types; but the reality is the Flex
6 Fuel Vehicle market is by far the fastest growing
7 alternative fuels vehicle platform in the country. We've
8 got nearly 12 million on the road in the United States
9 today, and by our estimates, we are approaching about a
10 million vehicles -- Flex Fuel Vehicles in California
11 right now. So great growth ahead, but we find that
12 pretty buzz worthy and we think it's very exciting.

13 The third thing that I want to talk about --
14 oh, one other thing, there are now about 75 different
15 Flex Fuel Vehicle options in the market available today
16 that consumers can go buy. So it is a pretty broad
17 market today in terms of choices. Pricing is another big
18 area, I know there have been questions about that pricing
19 competitiveness. A couple of things, from our consumer
20 experience and the feedback we get from consumers, the
21 concerns about mileage penalty are actually far lower
22 than what's often described. People typically think
23 about a 15 percent, you know, kind of 10-20 percent is
24 the band that people experience in their vehicles and
25 real world driving conditions, at least what we're

1 getting back from our consumers.

2 A couple of things. Tax policy drives a lot of
3 the competitiveness in alternative fuels, as we all know.
4 Like with other fuel types like biodiesel and natural gas
5 and others, there was an expiration of an important tax
6 credit at the end of 2011 that has increased pricing
7 somewhat, but important to know, when we were sitting at
8 the end of Q4, we had an inversion on Ethanol, kind of a
9 painful time for the industry; around the beginning of
10 the year, we saw about an eighty cent swing in those
11 prices. And the market has corrected for the loss of V-
12 tech, we've now got some of the best spreads between
13 CARBOB and Ethanol that we've ever seen, so pricing is
14 still in pretty good shape and we're offering good value
15 to our customers today, and our volumes have remained
16 strong through the beginning of 2012, so far.

17 A couple of things that are really important,
18 other things. The commodity markets obviously play a
19 factor, but the role of credits like the RIN Credits,
20 like Low Carbon Fuel Standard Credits, are extremely
21 important in making sure that these products will
22 continue to be competitively priced, to the point Tim
23 Carmichael made earlier, anything that limits the ability
24 to take advantage of those credits is challenging for the
25 industry, so we would support any moves to keep those

1 credits whole.

2 Finally, one last comment, we believe going
3 forward is going to be increasingly important to have
4 blend flexibility in Ethanol products. Consumers will
5 tell us with their purchasing habits what the right blend
6 of Ethanol from a pricing performance standpoint is, and
7 greater flexibility for blends beyond E85, in particular,
8 mid-level blends, we do feel will be very important in
9 making sure we always have price competitive fuel for
10 customers.

11 Finally, the last piece is convenience and the
12 infrastructure; this is the part Propel is working on
13 very hard. We did slow down our development a little bit
14 in 2011 in the back half due to just upheaval in the
15 financial markets, but I'm very pleased to say that we
16 are moving forward again on our station development, we
17 broke ground Monday on our next -- which will be our 27th
18 fueling location, so excited to be moving forward with
19 the program again.

20 And just as maybe a final comment, we're in the
21 market talking with investors all the time about
22 financing the infrastructure roll-out here in California,
23 investors are looking at the Low Carbon Fuel Standard as
24 an investment opportunity. They are watching the moves
25 that the Energy Commission makes as an important signal

1 of how serious California is about meeting the Low Carbon
2 Fuel Standard targets with sort of the average scenario
3 out of the ARB looking at well over a billion gallons a
4 year of E85 by 2020, investors are seeing this as a great
5 opportunity to invest. The challenge that I would put in
6 front of you today is, in prior Energy Commission plans,
7 we've noted that we need somewhere on the order of \$12 to
8 20 million of funding to hit the station infrastructure
9 targets we need. With this proposal on this Investment
10 Plan to actually cut from five down to two and a half,
11 it's sending a challenging signal for us in the market as
12 we talk about California's continuing support for Ethanol
13 fuels as a part of the Low Carbon Fuel Standard. So,
14 thank you.

15 COMMISSIONER PETERMAN: Thank you. Quick
16 question, Tim. Go ahead.

17 MR. CARMICHAEL: Thanks for coming today and
18 now that you've been in this market for a number of
19 years, I'm curious what your take is on why there
20 continues to be a pretty big disconnect between the
21 number of Flex Fuel Vehicles on the road in California,
22 the increased availability of the fuel, and yet a number
23 of people that operate those vehicles still not refueling
24 with E85?

25 MR. HORTON: Yeah, great question. Because

1 Flex Fuel Vehicles are flexible, they can go back and
2 forth between gasoline and E85. There are a lot of
3 customers who have a flex fuel and don't know it yet, so
4 we're doing a lot of effort and outreach around our
5 stations to help drive awareness. So there's a big
6 awareness issue and, you know, you see research from GM
7 that says up to 70 percent of their customers don't
8 understand that they can use high blend Ethanol in a Flex
9 Fuel Vehicle. So, because it's not a dedicated vehicle,
10 there is a big educational component and we've got to
11 make sure that we're price competitive, as well. And I
12 will be around in case others have more detailed
13 questions.

14 COMMISSIONER PETERMAN: Thank you. Neil
15 Koehler.

16 MR. KOEHLER: Commissioners, Advisory Board
17 Committee members, thank you for the opportunity. My
18 name is Neil Koehler, I'm the CEO of Pacific Ethanol.
19 And I'm here today representing the California Advanced
20 Energy Coalition. We are a group of existing California
21 biofuel producers, as well as companies that are working
22 to commercialize the next generation of technologies in
23 California. And I think one thing that we share and, I
24 think, is becoming a general consensus, and there was a
25 comment made earlier today I think by Jim on leveraging

1 existing infrastructure, and I think there's a real
2 appreciation that, to commercialize the next generation
3 of biofuel technologies, really integrating them into
4 existing biofuels infrastructure in California is
5 critical. And that's what all of our members share and
6 there are four Ethanol plants, three companies in
7 California producing over 200 million gallons of corn-
8 based Ethanol today, but very different than the corn-
9 based Ethanol elsewhere. It is the lowest carbon Ethanol
10 that is commercially available in the market today, in
11 fact, really some of the lowest carbon fuel generally
12 available to meet the Low Carbon Fuel Standard.

13 And we're not stopping there, we're all
14 working; each one of us has initiatives with other
15 companies to advance the technology, to integrate them
16 into this infrastructure where we have permits, we can
17 work the CEQA process, we can actually bring these fuels
18 to market a lot sooner than some of the others, so I very
19 much support this program, support a California
20 integrated policy that we see with AB 118, AB 32, the Low
21 Carbon Fuel Standard, all of these are very important to
22 send the right signal to private investors and companies
23 like ours and the ones represented by our Coalition.

24 Concern that the Low Carbon Fuel Standard, some
25 of the static around the lawsuit, hope that gets

1 clarified; concerned that frankly some of the comments
2 where there's this notion that credits that are generated
3 by companies and projects that benefit from this program
4 wouldn't generate credit for the Low Carbon Fuel
5 Standard, actually we think that that is a incorrect
6 interpretation of a law that was well intended to say we
7 don't want, certainly, oil companies that are mandated to
8 meet Low Carbon Fuel Standards to benefit from this
9 program. What we're talking about with the projects in
10 our industry and in this program is not mandatory, we're
11 actually trying to bring that production here as new
12 initiatives to then sell it to the oil companies. And
13 frankly, if you take the logical conclusion of these
14 restrictions, it would say that we would have to --
15 because the credit that we provide to refiners today,
16 because of our Ethanol being so much lower carbon than
17 the gasoline or Ethanol from out of the state, is passed
18 through as a premium in the price. And if we were to
19 then not pass a law on that credit, we would actually
20 reduce the cost of the fuel that we're selling and, in
21 effect, subsidize new oil companies and do exactly what
22 you want to see not happen. So there really is a
23 contradiction here and I would encourage a significant
24 re-look at that from the legal perspective to incorporate
25 that on a go forward basis.

1 In terms of draft Investment Plan, I think it's
2 right to have short term, medium term, long term
3 strategies. I think what we see with biofuels, both in
4 production and to Matt's distribution, and the E85
5 infrastructure, is the nearest and mid-term opportunity
6 to reduce carbon, and we would encourage probably more
7 investment, I think we've seen a reduction both on
8 biofuel production and E85, and other distribution over
9 the last couple of years, we would actually encourage
10 that go the other way because this does provide not only
11 the most immediate reduction in carbon, but the greatest
12 generation of jobs in California, and given their current
13 economic situation we certainly want to do all we can to
14 generate employment, that's what our industry has done.
15 We have just the three companies and four plants over
16 \$500 million of capital investment, a thousand jobs
17 economy-wide, and we're just getting started and with
18 very coherent, long-term policy, and funding from the
19 State of California partnering with our industry, we look
20 forward to bringing a lot more development and jobs to
21 the state and low carbon fuel. So, thank you.

22 COMMISSIONER PETERMAN: Thank you. And next
23 we'll have Michael Beasley.

24 MR. BEASLEY: Good afternoon. I'm Michael
25 Beasley with the Boeing Company and I'm here today to ask

1 if you could allow access within the biofuels category
2 for aviation biofuels. The way that I read the current
3 plan and the solicitation that's currently out on the
4 street is that those are limited to the gasoline diesel
5 biomethane, and there's really no opportunity within the
6 sustainable aviation biofuel arena.

7 The aviation sector is growing both with
8 increasing passenger miles traveled and cargo shipments.
9 Within the State of California, roughly at 1.5 million
10 gallons of JET A is dispensed each year, so it's a pretty
11 significant stream. There are some very -- I lost my --
12 there are some areas that make biofuels, aviation
13 biofuels, better than going after motor vehicle fuels;
14 for one, it's easier to capture the majority of the
15 commercial aircraft fleet. You pick one or two major
16 airports within the State of California, Los Angeles, or
17 San Francisco, for instance, and you're going to capture
18 the fueling in the majority of the commercial aircraft.

19 There's absolutely no need to change
20 infrastructure or aircraft, it's a drop-in replacement.
21 There's a demand for aviation biofuels. If you fly
22 United Airline, in this month's *Hemisphere Magazine*, I
23 found this coming down here, there's a letter from the
24 CEO of United talking about their efforts within the
25 biofuel and that they're very interested in increasing

1 both the production and the quantities and the price,
2 getting the price down on the fuels. So there's a demand
3 from our customers, the airlines, to supply these fuels.

4 The use of sustainable biofuels in the aviation
5 arena can achieve about a 60 to 80 percent lifecycle
6 reduction in CO₂ compared to fossil fuels. We're also
7 finding that the biofuels are cleaner than the fossil
8 fuels, so there may be co-benefits also, particularly
9 around the SO_x arena; we're not finding the sulfur
10 contamination that we find in fossil fuels. So, in
11 reality, we're probably going to end up getting co-
12 benefits from the use of these fuels.

13 And finally, the aviation sector has a goal to
14 reach carbon neutrality by 2020. We can get part way
15 there with the technology improvements, introduction of
16 new planes like our 787, but we can't get there without
17 sustainable biofuels. So we encourage you to expand the
18 list of available technologies. And thank you very much.

19 COMMISSIONER PETERMAN: Thank you very much.

20 MR. CARMICHAEL: Just a clarification from
21 staff. I'm pretty sure we never funded anything to do
22 with aviation, but did we fund a rail technology or
23 project in the past? I thought early on there might have
24 been one or two of those, I don't remember. No? Okay,
25 thank you.

1 MR. MUI: I just have a follow-up question to
2 Michael there. How much fuel does the LAX or SFO
3 actually use in terms of overall volumes?

4 MR. BEASLEY: I don't have that, but I can get
5 it for you.

6 COMMISSIONER PETERMAN: Thank you very much for
7 your comments. Next, we'll have Kyle Goehring with MT
8 Energy USA. Okay, well, Kyle if you come back, you can
9 come up. Next, we'll have Juanita Martinez.

10 MS. MARTINEZ: Good afternoon. My name is
11 Juanita Martinez and I've with Smith, Watson & Martinez,
12 and we're here representing Linde North America. And
13 Linde is a lead supplier of industrial specialty and
14 medical gases and engineering product services in North
15 America, and worldwide also. Linde would like to take
16 the opportunity to express some concern with AB 118's
17 biofuels grant solicitation that was recently released.
18 The biofuels grant solicitation restricts AB 118 grantees
19 from securing additional credits through the LCFS and
20 possibly other programs like RFS2. This restriction may
21 make it virtually impossible for an AB 118 grantee and
22 producer of biomethane for transportation fuels to access
23 full value of the LCFS credits, and the RN credits.

24 For companies such as Linde, this would deal a
25 severe financial blow to the viability of commercial

1 scale projects that depend on the full value of LCFS
2 credits and RN credits. Both of these credits are needed
3 in order for a company to make this commercial and to be
4 profitable, or even to break even. The current CEC
5 biofuel solicitation what was recently released has a
6 provision in it that suggests a restriction applies to
7 all AB 118 Grantees that wish to generate LCFS credits,
8 even if you are a voluntary producer of LCFS credits.

9 Linde would really like to highlight and make
10 the distinction between those parties that are regulated
11 under the LCFS and those parties that enter, opt-in
12 voluntarily, and believe that there is a distinction
13 between the two of those. And we'll be having
14 discussions with ARB, as well, and would encourage CEC to
15 talk with ARB and get a perspective from them as to the
16 difference between the voluntary and regulated parties
17 under LCFS.

18 As you may know, Linde and their partner in
19 High Mountain Fuels, a joint venture with waste
20 management, installed a system to purify and liquefy
21 natural gas and a source of renewable biomethane fuel at
22 the Altamont Landfill near Livermore. When the plant
23 began operations, it was designed to produce up to 13,000
24 gallons a day of liquefied natural gas that would fuel
25 hundreds of waste collection trusts in California. Linde

1 and Waste Management were able to help reduce emissions
2 because of programs such as AB 118, which makes these
3 projects economically viable. Linde believes that the
4 biofuels grant solicitation is an incorrect
5 interpretation of AB 118 statute and CEC regulations. In
6 order to make these projects economically viable, Linde
7 will need to continue to qualify for AB 118 money for
8 building production infrastructure and also have access
9 to the full value of LCFS credits. Without these
10 credits, there will be no more Altamonts in California,
11 in addition to renewable LNG. This treatment would also
12 make any further green hydrogen plants difficult to
13 justify. It would be difficult, if not impossible, for
14 anyone to contemplate the development of a green hydrogen
15 project in California if, by registering for the LCFS
16 credits, makes them ineligible for AB 118 funding.

17 Linde is concerned that the treatment of
18 hydrogen and LCFS will be negatively impacted, as well,
19 if the current solicitation definition expands to other
20 solicitations such as hydrogen. In order to make these
21 hydrogen stations economically viable, it is imperative
22 that Linde continues to qualify for both grants.

23 Linde would also like to highlight the
24 importance of setting up a system so that parties can
25 receive funding for at least some project work prior to

1 getting project approval, which we believe was dealt with
2 and addressed in the Wieckowski Bill that was passed last
3 year, and so they just wanted to express their support
4 for that provision. Linde also believes that consistent
5 funding signals over multiple years are necessary to
6 support long term commitment from companies.

7 Lastly, Linde would like to point out the
8 importance of quality vs. quantity in the projects,
9 specifically hydrogen fueling stations. When awarding
10 grants, the CEC should review project proposals based on
11 station characteristics, such as fueling time and hourly
12 throughput vs. simply looking to maximize the quantity of
13 discrete hydrogen stations built. Thank you.

14 COMMISSIONER PETERMAN: Thank you very much.
15 Next we'll have Chuck White.

16 MR. WHITE: Thank you very much. Chuck White
17 with Waste Management. Even though Pat tried to make a
18 lawyer out of me in his comments earlier, I'm an
19 engineer, although I've been working in trying to
20 reconcile reality with California public policy for 30
21 years, and it is a challenging exercise sometimes.

22 With respect -- I've got three points I'd like
23 to make, I hope I can have maybe a little bit more than
24 three minutes, the one is the natural gas fueling vs.
25 vehicles, the second one being the school alternative

1 biofuel production, and the third is the one that Juanita
2 just referenced, which is the interpretation of AB 118
3 statute relative to credits, and also your 3103
4 regulation.

5 COMMISSIONER PETERMAN: I will ask, though,
6 when you touch on the third point, since that's not
7 specifically what we're covering in the 2013 Plan, and
8 we've talked about it, to actually make those comments
9 brief -- in terms of the third point, but go ahead, I'm
10 not going to cut into your three minutes.

11 MR. WHITE: I'll be brief, as brief as I can.
12 With respect to natural gas fueling and infrastructure,
13 on your slide 19, Charles indicated that stakeholders
14 emphasize a need for further focus on increasing vehicle
15 deployment rather than expanding infrastructure. That's
16 probably the true if you're a natural gas fuel provider,
17 but if you're a natural gas truck or vehicle operator,
18 you have both challenges, the cost of the vehicles and
19 you have the cost of the fueling infrastructure, the
20 fueling infrastructure can be \$2 to \$3 million. We
21 really need the help on getting the incremental cost of
22 the natural gas trucks knocked down, but when you're
23 facing with deploying trucks, you've got to have a
24 fueling infrastructure and that is up to \$2 to \$3
25 million. So, rather than say up to \$2.5 million for

1 natural gas fueling infrastructure, we would say not less
2 than \$2.5 million for fueling infrastructure, if you
3 could please do that. And also maybe change it to "some
4 stakeholders," rather than "stakeholders."

5 My second point, the issue on alternative
6 biofuel technology, the \$20 million was a little bit
7 disappointing, I was hoping to see something -- \$30
8 million that would be kind of consistent with what we've
9 seen, the funding level in the past.

10 With respect to setting up different
11 categories, I have a slightly different view of that,
12 although I understand Mr. Smithline and Mr. Lapis' desire
13 to have pre-landfill. We support pre-landfill
14 development projects, we'd like to see those go forward;
15 actually, the way the plan is written, you actually
16 already are encouraging that by ensuring that waste
17 derived fuels have a high priority, and low greenhouse
18 gas emitting alternatives have a high priority, as well.
19 Generally, pre-landfill development projects for
20 producing biofuels will have a much lower carbon
21 intensity than landfill development projects, so there's
22 already a built-in incentive to do that.

23 I think it's important to not lose sight of the
24 fact that it's important to try to get landfill gas
25 treated and into pipelines. This is an issue that I know

1 this Commission is pursuing in a separate issue, RPS. We
2 think that maybe the time is right for changing some of
3 the rules on landfill gas that have been in place for the
4 last 20 years, and trying to get clean renewable natural
5 gas into pipelines so it can be wheeled both for RPS, but
6 also for funding vehicles. And if we can't have access
7 to AB 118 funds to help make that a possibility, it's
8 really going to be difficult.

9 So I would hope that there is some flexibility,
10 you can maybe move money from the different categories,
11 from biomethane to diesel to diesel substitutes to
12 gasoline substitutes. In reality, all of these fuels,
13 biomethane, diesel substitutes, and gasoline, can be made
14 from waste derived materials, so focusing only on
15 biomethane really doesn't make sense. If you really want
16 to encourage diverging from landfills, you want to
17 provide support for all of these fuels, which are derived
18 -- made from waste derived products. And as is well
19 known, the lowest carbon fuels in California are waste
20 derived fuels.

21 To my final point, following up on what Juanita
22 said with respect to -- the actual statute for AB 118
23 says for the purposes of both programs created by this
24 Chapter, eligible products do not include those required
25 to be undertaken pursuant to State or Federal law, or

1 District rules or regulations. So if you're required to
2 produce a Low Carbon Fuel Standard, who is that? That's
3 an oil company, that's someone who produces diesel and
4 gasoline. And they have to meet their low carbon
5 objectives by either producing that fuel or buying the
6 credits from somebody else. We are an opt-in, voluntary
7 provider through High Mountain Fuels and hopefully other
8 future projects, we're not an oil company, and we're not
9 mandated to comply with the Low Carbon Fuel Standard. So
10 we would really urge you to draw a distinction between
11 those that are mandated to comply with the Low Carbon
12 Fuel Standard vs. those that voluntarily opt-in to
13 produce fuels and to lower the overall carbon intensity
14 of fuels we use in California.

15 That is really the direction we've been
16 receiving from the Energy Commission for all the
17 solicitations and all the plans up to this last
18 solicitation that came out about a month ago where
19 suddenly for the first time we saw that there appears to
20 be a limitation on those who opt-in to the Low Carbon
21 Fuel Standard. When we first started working with the
22 ARB on the Low Carbon Fuel Standard, we raised concerns
23 about how does someone trade credits if you're not a
24 regulated party, so they provided that option, now, to
25 opt-in as a regulated party; but there's a distinction,

1 we're not a mandatory regulated party, we are a voluntary
2 regulated party. And I'm worried that it's just simply
3 the language of the LCFS that is being interpreted so
4 that somehow we have a regulated obligation under LCFS,
5 when we really don't. And there's all kinds of quirks if
6 you really look at it. If you produce a liquid biofuel,
7 like we produce at Altamont, the person that produces
8 that fuel is also the person that generates the LCFS
9 credits. If you produce a gaseous biofuel, the person
10 who gets the AB 118 grant that produces the biomethane
11 gas is different than the person who fuels the vehicle,
12 but the LCFS gives LCFS credits to the person that fuels
13 the vehicle. So there is a separation there. So you can
14 envision that you might have a situation where someone
15 producing a liquid biofuel would be subject to this
16 restriction that came out in your most recent
17 solicitation, but someone producing a gaseous biofuel
18 would not because they're two separate entities, the one
19 that produces the gaseous, the one that fuels the
20 vehicle. It doesn't make any sense. So the right way to
21 look at it is the restriction applies to those that have
22 a mandatory obligation to comply on the LCFS, but it is
23 beyond the LCFS -- does this apply to the RFS2? The
24 recent solicitation was completely silent on whether or
25 not that interpretation applies to other programs beyond

1 the LCFS.

2 It goes beyond that. What about Federal tax
3 incentives? What about SB 71, California's program to
4 give sales and use tax exclusion? Are we somehow
5 restricted from being able to take advantage of that
6 because we receive an AB 118 grant? What about the
7 forthcoming greenhouse gas cap-and-trade regulations that
8 are supposed to be bringing in transportation fuels in
9 the year 2015? Does that mean we're going to not be able
10 to generate credits under the greenhouse gas -- so this
11 is a huge issue that obviously we're not going to resolve
12 in this group today, and maybe it's not even an issue for
13 the Advisory Committee, but there needs to be a clear
14 focus going forward so we can understand how this
15 interpretation can be modified, certainly for the
16 existing solicitation, but also for prior solicitations
17 that have already gone out, for which we're in the
18 process of negotiating contracts and getting that done,
19 but also future solicitations going in the future
20 because, if that isn't clarified, I can tell you that no
21 one is going to build commercial scale biofuel facilities
22 in California if you are limited -- because they are
23 financially challenging from the outset. The AB 118
24 grant is absolutely necessary, but so are all the other
25 credits we can generate through the sale. And if you

1 begin to restrict that, you're going to limit AB 118 to
2 RD&D projects, and it's not going to be eligible to be
3 used for commercial scale projects in the future. So
4 this is a huge issue and it really deserves everybody's
5 attention. I would love to make myself available at any
6 time and place to talk about this further, to see if we
7 can get some better clarification on what the true
8 meaning of AB 118 is. Thank you. Sorry for my more than
9 three minutes, by the way.

10 COMMISSIONER PETERMAN: No, thank you for your
11 comment -- No, I'm just redirecting --

12 MR. SHEARS: I just want to -- it's related to
13 this whole thing about the credits. I mean, and also to
14 Juanita's testimony. You know, as an Advisory Committee
15 member from year one, my understanding has always been
16 that it's been disproportionality role was always in
17 place --

18 MR. WHITE: For people that mandatorily have to
19 do that. I wish Peter Ward was here to defend himself --

20 MR. SHEARS: My understanding was that --

21 MR. WHITE: -- I can't tell you the
22 conversations I've had with folks --

23 MR. SHEARS: My understanding was that the
24 Energy Commission funded a project, you know, your
25 ability to earn credits was proportional to the money you

1 brought in outside of AB 118 funding. Setting aside some
2 of these nuances, you know, for many of us in the room
3 here, you know, I'm finding this very abstract. And in
4 terms of any real damage to industry, or how this might
5 compromise development -- for the developments around
6 this, I'd like to see some kind of numbers where we can
7 relate to what the impacts really are because, right now,
8 we're just talking, really, for us that are listening,
9 this is all just abstract in terms of what the damages
10 might be, or how it might compromise development of the
11 industry, or whatever. So it would be very helpful if we
12 had something more concrete that we could look at more
13 closely and understand things more fully if we indeed are
14 going to be mutually engage in a follow-up conversation
15 around this.

16 COMMISSIONER PETERMAN: Great, thank you. This
17 is a subject area which the Commission will be looking
18 at. If you would like some materials we've seen by the
19 Advisory Board, and you can submit them as part of your
20 comments in the '12-'13 Plan --

21 MR. WHITE: I will be sending written comments
22 on the three issues that I raised.

23 COMMISSIONER PETERMAN: Okay, thank you, Chuck.

24 MR. WHITE: Thank you.

25 COMMISSIONER PETERMAN: Next, a representative

1 from CF USA? Maybe you can state your name when you get
2 to the mic. I'll ask that you keep your comments to
3 around three minutes.

4 MR. VAN BOGART: Good afternoon, my name is
5 John Van Bogart. I'm with Clean Fuel USA and I just
6 wanted to provide a brief update on some of the things
7 going on in the propane vehicles and fuel and
8 infrastructure industry. Building on the success of the
9 school bus program, and I wanted to echo some of the
10 comments that Ralph had made earlier with school buses,
11 propane and natural gas are two of the most viable fuels
12 for school districts to deploy. These fuels actually
13 save these school districts a lot of money because
14 propane is \$2.00 a gallon, and gasoline is \$4.00 a
15 gallon, so there is quite a bit of cost savings for
16 school districts.

17 Some of the big success stories, you know,
18 we've got nearly 5,000 vehicles into the marketplace
19 today with 1,000 of those here in California between the
20 medium-duty and the bluebird product, Thomas Bus, now,
21 through Freightliner is launching a new C Bus and also
22 Collins with the Cutaway. The General Motors six liter
23 engine is now factory direct OEM, so this product is a
24 five-year, 100,000 mile warranty, sold service, and all
25 the maintenance is done directly through the dealership.

1 This is giving a lot of confidence to fleets around the
2 country. We currently have several units with UPS up in
3 Canada for testing for cold weather, they're looking to
4 the United States and states like California to deploy
5 this product. These are some of the platforms that are
6 available in the Cutaway six liter. This product here,
7 the Izuzu, is going to be an aftermarket in the
8 beginning, this is also in the six liter, this is a very
9 popular delivery vehicle, and especially here in the
10 southland and the big cities where they need the Cab 4
11 for turning radius. This is the new Freightliner
12 product, this is a brand new eight liter engine from
13 General Motors that is about ready to be released.
14 Freightliner is going to start taking orders on this
15 product this April, a limited production, with full
16 production in January of 2013. This is also the same
17 platform that the school bus is going to be built on. So
18 this opens up the market to a lot of shuttle bus markets
19 and delivery markets, as well.

20 One thing interesting, the new GM engine,
21 they're getting up to torque and horsepower curves, now,
22 they're getting very close to diesel with this engine,
23 with 375 horsepower and 475 pounds of torque, is pretty
24 significant. Again, this is the school bus, these are
25 the different wheel bases this product will come in; the

1 eight liter is also going to go on a port terminal
2 tractor, there is a lot of ports down in Los Angeles that
3 are currently running propane, they've run propane over
4 the years, they are very excited to see an OEM product
5 come to the marketplace. Originally, we were going to
6 put this also in a hybrid application, but we thought the
7 eight liter was a bit overkill; we're looking now at a
8 two liter, or a four liter engine, propane powered, to
9 bring this into a hybrid application.

10 This is a slide that shows the differential
11 between gasoline, diesel and propane pricing.
12 Historically, propane has been about 30 percent less than
13 gasoline on a gasoline gallon equivalent. Today, with
14 the added fines of natural gas, propane is inherently
15 found as a natural gas liquid. Nearly 65 percent of the
16 propane now comes from natural gas, and with a lot of the
17 discovery, especially here in California with Elk Hills,
18 we're seeing -- we're exporting now propane nationally at
19 two billion gallons annually, we are exporting clean
20 alternative fuel to other countries. So the motor fuel
21 industry is a place where the propane industry is looking
22 to advance additional vehicle platforms.

23 This is cost per miles driven with no
24 incentives. This is what a fleet is going to look at in
25 driving the vehicle on propane vs. gasoline or diesel, so

1 we're highly cost competitive against those fuels, less
2 expensive. This is the infrastructure network we're
3 currently deploying throughout the United States, so this
4 is ARRA funding, 34 in California, six are up and
5 running. LA Unified is burning about 60,000 gallons a
6 month with their school buses. Unfortunately, with the
7 buying cycle, none of the funding from the CEC was
8 available just because of the release of the RFP, or the
9 PON, and the way they buy. This year, that money is on
10 the table and we're going to see that disappear rather
11 quickly. These are the allocations in the current plan,
12 we made some suggestions for this, we got some, didn't
13 get them all. As far as the weight class, the
14 Freightliner, when it comes on board, this here on the
15 right side where that \$20,000 is the red, we noticed on
16 page 6 there was a provision in there that would allow
17 the Energy Commission to reallocate some of those funds,
18 so this is going to have a 90-gallon tank on it, so it's
19 going to be quite a bit more expensive than, say, the six
20 liter is, so we would think that this \$20,000, the same
21 as the school bus funding, would be good for that medium-
22 duty truck.

23 So in the future with support from the CEC,
24 some of the things that we're looking forward to in the
25 future would be some of the innovative technologies in

1 advance fuels. One of the things that's happening around
2 the world and in Europe and in Asia is dimethyl ether,
3 DME. Why that is important to the propane industry is
4 that fuel, the handling properties, are almost identical
5 to propane. So the refueling infrastructure --
6 dispensers, tankers, storage tanks, things of that nature
7 -- dimethyl ether can go right through that distribution
8 system. So the industry is very interested in bringing
9 that fuel in not only as a direct fuel, as DME, which can
10 be deployed at a diesel engine with fuel system
11 modifications, but also as a blend propane. DME can be
12 produced as a bio fuel, so as ethanol is to gasoline as a
13 blending agent, we've got testing now with engines up to
14 20 percent DME, 80 percent propane, it can go right in a
15 spark ignited engine. So these are some of the things
16 that we're looking forward to.

17 Also in our ARRA funding, we're going to --
18 we've got \$30,000 available, it looks like we're going to
19 partner with Rio Hondo College in Southern California for
20 the workforce development and some of the clean fuel
21 service centers that we have proposed, and so we look
22 forward to some of that funding maybe in the next
23 solicitation that you guys were talking about here today.
24 And this is my contact information, and that's all the
25 comments I have.

1 COMMISSIONER PETERMAN: Thank you very much.

2 Next, we'll have Caroline Quinn.

3 MS. QUINN: I'm Caroline Quinn, Director of
4 Engineering Services with the Delta Diablo Sanitation
5 District and Project Manager for the Bay Area Biosolids
6 to Energy Coalition. The Coalition is comprised of 16
7 public agencies that represent over two million people in
8 the Bay Area, and we're collaborating to create a local
9 sustainable solution to biosolids management by tapping
10 the energy and the resources embedded in the biosolids
11 that we produce through our treatment process.

12 Currently, most of our agencies haul these biosolids long
13 distances, over 800,000 miles annually just among our 16
14 Coalition agencies, for land application and alternative
15 daily cover at landfills. However, these practices are
16 becoming increasingly difficult and restricted and are
17 not sustainable in the long term. Bay Area agencies are
18 seeking to develop biosolids options within the Bay Area
19 to reduce vehicle miles associated with biosolids
20 management.

21 There is great potential to reduce the vehicle
22 miles, the emissions associated with present hauling
23 practices, and to utilize the biosolids to produce fuels
24 closer to where the biosolids are generated. We have
25 identified several technologies with the potential to

1 produce from biosolids, different forms of renewable
2 alternative vehicle fuels. These forms include clean
3 diesel, low sulfur clean diesel, hydrogen fuel, and
4 Fischer-Tropsch's liquids that can be used as fuel
5 additives to reduce emissions.

6 The feedstock potential associated with waste
7 water treatment plants is vast and growing, and produced
8 on a 24/7 basis. The San Francisco Bay Area alone
9 produces over 156,000 dry tons of biosolids per year.
10 One wet ton of biosolids has the potential to produce 40
11 gallons of clean low sulfur diesel fuel, or 26 kilograms
12 of clean renewable hydrogen.

13 We suggest the Energy Commission consider
14 augmenting the hydrogen funding allocation for hydrogen
15 production from renewable resources such as biosolids.
16 We also encourage fueling infrastructure to be used for
17 on-site production, using renewable resources such as
18 biosolids. And we also request that this Advisory
19 Committee consider a carve-out of a funding category for
20 biosolids to fuel. The Investment Plan proposes
21 investment in biofuels, including funding for waste-based
22 resources and identifies a number of those waste-based
23 resources for fuel. As investment decisions are
24 considered, our agencies would encourage the Energy
25 Commission to specifically include biosolids from

1 publicly-owned wastewater treatment plants as a source of
2 biofuel. Thank you so much for the opportunity to
3 comment.

4 COMMISSIONER PETERMAN: Thank you very much.
5 Next, we'll have John Boesel -- Boesel. I usually don't
6 get the blue cards, the Chairman does, so I'll have to
7 get used to that.

8 MR. BOESEL: Yes. Madam Chairwoman, thank you
9 very much. Members of the Advisory Committee. A couple
10 of comments, just a very big picture, one is that I think
11 in terms of the Investment Plan, it's always good to look
12 around the environment to see how things have changed,
13 and I think, largely due to Tom Cackette's efforts and
14 others, with the CARB vote, things have changed, and it
15 should impact the thinking around the Investment Plan.

16 I do think that what we're hearing today is
17 that this remains a very target rich environment, that
18 there are so many great investment opportunities. This
19 really argues for renewal of this program, an extension
20 which is something that we are beginning to work on.

21 There are a couple of key items that are new to
22 the Plan that I want to introduce, but first hit on a
23 couple of the staff recommendations and I really
24 appreciate how quickly the staff turned around this
25 report and its simplicity and clarity. One is that I do

1 think the recommendation for building on last year's
2 success with zero emission trucks is a very good idea.
3 If anything, I would double-down given the quick uptake
4 of those trucks, and the fact that at least one
5 California manufacturer was involved. I think it's a
6 very good idea. I would also point out that the South
7 Coast AQMD and the San Joaquin Valley APCD contributed
8 funds directly to that program, as well, they augmented
9 that program directly without going through the Air
10 Resources Board. So that is a possibility.

11 Secondly is I think the investment -- I would
12 support what Eileen and others said about increasing the
13 investment in electric vehicle infrastructure, I do think
14 that is very important for people who put in plugs and
15 chargers at their home, but I think public investment
16 ought to be targeted toward workplace and fleets. I
17 think those are two places where there are gaps and there
18 are real needs to help move those areas forward. I call
19 workplace charging best range extender that there is and
20 I think that can be done very affordably.

21 I think the Natural Gas Truck Program has done
22 well and, in looking around the environment, one of the
23 things that is really important to look at is what's
24 happened back in Washington, D.C. We saw a number of key
25 Federal tax credits go away on December 31st of last year

1 and it reminds me of the Bruce Springsteen song, "They're
2 Gone and They Ain't Coming Back." And I think that's
3 probably true. So, once again, this is a case where
4 California is putting out -- CEC put it out in a
5 solicitation this week for alternative fuel vehicle
6 infrastructure, saying we're moving ahead, just at the
7 same time, a month earlier, Congress says, "We're done."
8 So this is so important what we're doing here in
9 California and I think an area-wide, additional
10 investment in Natural Gas Trucks is worthwhile.

11 There were a number of very good projects in
12 the Advanced Heavy-Duty Vehicle solicitation that weren't
13 funded. We're very appreciative of having just learned
14 this morning which ones that we proposed got funded. I
15 will say that there was -- it was interesting that some
16 really good construction equipment was funded,
17 demonstrating projects, some smaller vehicles, and
18 smaller class. There is still the I-710 corridor type
19 issue, the zero emission longer range drainage truck
20 issue that needs to be addressed, and I think that's
21 where some of the funding proposals that were passed got
22 a passing grade, but weren't funded, would be worthy of
23 additional investment opportunity.

24 And last, the two last items that aren't
25 covered in the plan, one is our own state fleet, not a

1 pretty picture. And there is so much more this state can
2 be doing with its own fleet and being a real model. I'm
3 glad ETP is here, I'm glad the CEC is here, I'm glad that
4 CARB is here, but where are the big eight? The big eight
5 fleets that actually -- the state agencies that buy
6 vehicles, they should be here, they should be applying
7 for this money, I mean, the Governor ought to be dragging
8 them over and getting them to apply for that money and go
9 after that. So I would almost say build in a preference
10 that if state fleets apply for this money, thought ought
11 to be given a preference because that is so important for
12 us to build demand and for the state to really show
13 leadership.

14 Then, lastly, and I appreciate -- I'm going a
15 little over my three minutes, I think -- but lastly is
16 there is a gap right now between the CARB CVRP light-duty
17 vehicle incentive and the hybrid vehicle incentive
18 program, there is basically -- the pick-up truck is the
19 gap. And there are a number of manufacturers that have
20 plug-in pick-up trucks that are coming to the market.
21 Eventually, there will be a motivation with the new
22 light-duty vehicle standards for these kinds of trucks to
23 be produced. But that will phase-in in 2019-2020
24 timeframe. There is a huge opportunity right now, that
25 pick-up trucks are the best selling vehicles in the

1 United States and in California, F150 Fords. There is
2 one California manufacturer that has a plug-in hybrid
3 pick-up truck, there are a couple of others. I think
4 that's a gap, an opportunity to invest, say, \$5 million
5 would be very helpful. Thank you very much.

6 COMMISSIONER PETERMAN: Thank you. Yes,
7 Eileen.

8 MS. TUTT: A real quick question for the staff.
9 The state fleet issue is, I think, a very interesting and
10 compelling one, and I wanted to know not just the
11 vehicles themselves, but what about state garages where,
12 not just state workers park, but also the members of the
13 public park, is there an opportunity -- can they access
14 this funding for workplace charging, so to speak? Is
15 that a potential possibility under AB 118 rules, or not?
16 Do you know?

17 MR. CARMICHAEL: I think it is, but it's
18 curious that they haven't engaged. I mean, John raises a
19 really -- I'm pretty sure. I'm pretty sure, yes.

20 MR. PEREZ: Yeah, one of the fascinating things
21 that is going on right now, not only with the State of
22 California, but other fleets are actually reducing the
23 number of cars they're liquidating right now, which is
24 kind of scary and they're not replacing these vehicles
25 because of the budget constraints not only faced by the

1 State of California, but counties and cities also.
2 That's one of those things that makes it real tough right
3 now, and I'm one of those people who parks in the State
4 garage, it's amazing how many open spots that are over
5 there right now because of the liquidation of the fleet.

6 COMMISSIONER PETERMAN: Jennifer has some
7 actual additional information, let's hear from her before
8 we hear other any other comment.

9 MS. ALLEN: Eileen, we are funding State
10 garages upgrades through Clipper Creek and we're hoping
11 that there will be some new ones with the Coulomb
12 project, too.

13 COMMISSIONER PETERMAN: So next, we'll have Dan
14 Davids and, for those who are on the WebEx, we've got
15 four more speakers who are present in the room, and then
16 we'll turn to a few comments on WebEx. And I'm just
17 saying in advance, when we have the next meeting, we have
18 so much good conversation here, I know everyone is not
19 going to be able to say everything they wanted to say, so
20 we'll schedule the next one for a longer period so that
21 we can have the full attention of the Advisory Committee
22 and hear all public comment. But thank you for your
23 patience. Dan.

24 MR. DAVIDS: Hi, thank you very much. I'm with
25 Plug-In America. I just wanted to say I got to spend the

1 15 minutes at our break today driving the ActiveE with
2 Andreas, and it's a dynamite car, so we need more EVs
3 like that on the road.

4 I want to thank the Commission for its
5 leadership on electric charging infrastructure, but I
6 agree with John and Eileen that perhaps the charging
7 infrastructure could be funded a little more. And
8 specifically, I think Level 2 is, you know, progressing
9 pretty well, not just here but in other states,
10 Washington, Oregon, and many others. But I want to speak
11 for a second about Level 1, and we have to remember that,
12 you know, most cars are parked 23 hours out of the day,
13 or they're parked a long period of time at the workplace,
14 or overnight at your house. And so there's a great deal
15 of energy that could be transferred, you know, just
16 through a simple Level 1 plug. And I think Level 1 is
17 kind of the Rodney Dangerfield of charging, you know, it
18 doesn't get the respect that it really should. And you
19 can get a lot of bang for the buck just plugging into
20 Level 1. So, I mean, things like hotel parking, long-
21 term parking at Airports, workplace charging as has been
22 mentioned.

23 But I also wanted to talk about Level 3,
24 technically really it's DC Fast Charging. You know,
25 California is kind of behind on the whole West Coast

1 Green Highway Project. Washington and Oregon, every week
2 these chargers are turning on. And it would be good if
3 the CEC could help out with the CHAdeMO -- well, CHAdeMO
4 obviously -- chargers to get that built out completely,
5 so we've got charging from Baja to BC, as they say. And
6 one of the ideas, we've talked about it at Plug In
7 America is that, under the notion of the Clean Fuel
8 Outlets, it might make sense to put some DC Fast Chargers
9 at the hydrogen fueling stations. There's already going
10 to be, you know, 483 phase at those facilities to deal
11 with the hydrogen infrastructure; the marginal cost of
12 adding a DC charger is probably not much more than
13 \$10,000 or \$12,000, and the price on those is coming
14 down, you know, as we speak.

15 On a sort of other subject, it was interesting
16 hearing the 50,000 vehicles hydrogen by 2015 to 2017, I
17 did a little quick back of the envelope calculation and I
18 was assuming that, you know, if those cars drive about
19 1,200 miles a month and they fuel four times per month
20 per vehicle, that's 200,000 fuelings -- once all these
21 cars are on the road -- per month. To make the math
22 easy, let's assume 40 stations, that's 5,000 fuelings per
23 month per station. Per day, that works out to 170
24 fuelings per station, or about 10 fuelings per hour, or
25 one every six minutes -- I'm assuming, you know, I'm

1 leaving out the wee hours of the night, so I made the
2 math simple. So that's assuming all those cars, you
3 know, and I'm sure it takes more than six minutes to
4 charge hydrogen vehicle, but those cars are certainly
5 not going to be lined up end to end for 16 hours in a row
6 to make that happen. So I'm just suggesting or wondering
7 whether in your specs, in your RFPs for hydrogen fueling
8 stations, how many actual nozzles, or how many gas pumps,
9 as it were, are actually going to be there? Because I
10 think if there aren't going to be four or six, or maybe
11 even eight, these folks are going to be waiting a long
12 time at some hours of the day to fill up their vehicles,
13 so I want to make sure the stations can handle the
14 throughput of both the product and the customer.

15 Lastly, just to the fellow who did mention on
16 the phone -- I think he's gone now -- where he put forth
17 the long tailpipe argument about charging EVs off of a
18 coal-powered grid. California is a little less than 20
19 percent coal-fired at peak, and much less than 20 percent
20 at off-peak now days. And this is really a well settled
21 analysis at this point, you know, going way back to EPRI,
22 NRDC study, and numerous other studies, so it's really
23 kind of a non-issue, I just wanted to kind of get that on
24 the record with it as new to the subject.

25 COMMISSIONER PETERMAN: Thank you very much.

1 Next, we'll have Pete Cooper, Better Place. I thought
2 that was going to be you -- different name. Okay. Same
3 name, okay. I guess he's no longer in the room. Next,
4 we'll have Obrie Hostetter.

5 MR. HOSTETTER: Hi. I'm Obrie Hostetter. I'm
6 with 350 Green and I want to say thank you for putting
7 together such a comprehensive plan and allowing me to
8 comment. 350 Green is currently deploying 24 Fast
9 Chargers within Northern California. We are very
10 thankful to the grants that we have received through
11 California Energy Commission, through ABAG, through Bay
12 Area Air Quality Management District. I will say these
13 are partial grants, they cover about 20-25 percent of the
14 charging stations that we are deploying. While 24 may
15 sound like an impressive number, I am in charge of doing
16 the infrastructure planning, there still are going to be
17 huge holes in our network. All of these chargers, right
18 now, are going into the Bay Area in areas like
19 Sacramento, our State Capitol, aren't getting these
20 stations just because of the way these grants are set up.
21 So while we really appreciate the \$7.5 million for EV
22 infrastructure coming, we really hope that Fast Charging
23 will be a pretty significant piece of that so that we can
24 continue to expand the infrastructure and expand the
25 network. I want to be able to drive to Sacramento and

1 back in the same day and not have to leave my car for
2 eight hours in one place. So, thank you.

3 COMMISSIONER PETERMAN: Great, thank you very
4 much for your comments. Next, we'll have Mel Assagai.
5 Did I say your last name right, Mel?

6 MR. ASSAGAI: It's Assagai, but that's okay.
7 Commissioners and Advisory Committee, thank you for this
8 opportunity to comment.

9 COMMISSIONER PETERMAN: Could you lift the
10 microphone up a little bit?

11 MR. ASSAGAI: Testing. Thank you for this
12 opportunity to comment on the Investment Plan. First, I
13 want to say, overall, the staff should be very proud of
14 an excellent piece of work. We think this really covers
15 the ground and makes a number of improvements on where we
16 are today. I am here today on behalf of two clients, one
17 is Navistar, the largest school bus manufacturer, in
18 fact, manufactured the two hybrid buses that were
19 mentioned earlier, and a whole range of medium- and
20 heavy-duty products.

21 We think the Plan is excellent, we want to
22 particularly compliment the Plan where it deals with the
23 buy-down natural gas and propane vehicle program, we
24 think that's an excellent program, one that ought to be
25 maintained, but actually expanded. We think there is

1 room in the market for more of these vehicles and
2 Navistar has just recently opened up a whole range of its
3 products as natural gas products, so we're looking
4 forward to working with you on doing that. In that same
5 connection, and I'll come back to it, but for my other
6 client, we think the workforce development part of what
7 you're doing is very very important now, but maybe not in
8 the traditional way. We think it's important that the
9 workforce development be targeted so that, if an industry
10 needs certain kind of technology skills right away, that
11 it's flexible enough to create those opportunities for
12 that industry, and I understand that they can have -- if
13 that's done -- they can have what they need maybe in
14 three or four months, as opposed to a year, or a year and
15 a half later, which doesn't give companies what they need
16 in terms of developing products, or developing services.
17 And as I say, overall, Navistar is very pleased with the
18 project, the program, and compliment you all on that.

19 I also represent the Electrification Leadership
20 Council, which has a proposal into the docket to create
21 an EV ecosystem in California. I want to identify, with
22 all the comments made on the need for more charging
23 facilities, more programs and policies that enhance
24 opportunities for people to buy, use and gain the full
25 benefit of electrical vehicles. In that same connection,

1 I want to repeat my workforce development recommendations
2 again, in that industry we need to have -- I think people
3 agree -- the greatest number of new trained people to
4 deal with what we know is going to be growth in the
5 passenger vehicle part of the EV industry, but also in
6 the commercial and where our clients are. So, again, we
7 think the Investment Plan is excellent, we think it
8 should go forward, and we just wanted to offer our
9 comments.

10 COMMISSIONER PETERMAN: Great, thank you for
11 your comments. Is there anyone else in the room that has
12 not spoken, but would wish to speak? Now is your
13 opportunity to do so. Okay, I'm going to turn to the
14 WebEx, then. Next, we have Nathan Lewis. Are you on the
15 line, Nathan?

16 MR. LEWIS: Yes, I am.

17 COMMISSIONER PETERMAN: Great. Thanks for
18 holding in there with us. Go ahead.

19 MR. LEWIS: Thank you. My name, of course, as
20 you know, is Nate Lewis. I teach Chemistry and Combined
21 Research in Policy and Clean Energy for California
22 Institute of Technology, better known as CalTech. I'm
23 also Director of the United States Department of Energy's
24 only Fuels from Sunlight Innovation Hub, the Joint Center
25 for Artificial Photosynthesis, or JCAP.

1 Under a selection process dictated by the top
2 levels of DOE, the direct reporting to Congress, JCAP was
3 awarded the CalTech and In-State Partners and mid-2010 by
4 the U.S. Department of Energy. Are we having noise in
5 the background?

6 COMMISSIONER PETERMAN: No, just a couple
7 chairs moving, but we're hearing you fine. Keep going.

8 MR. LEWIS: Good, good. The Center is a \$125
9 million five-year program aimed at completing critical
10 research and development to develop a scalable prototype
11 that will use sunlight, water --

12 COMMISSIONER PETERMAN: Now we can't hear you.
13 Are you still there? Nate? Just hold one second if
14 you're speaking.

15 MR. LEWIS: Yeah.

16 COMMISSIONER PETERMAN: Please go ahead, we
17 lost about the last sentence of that, if you don't mind.

18 MR. LEWIS: Okay, I'll do it.

19 COMMISSIONER PETERMAN: Thank you.

20 MR. LEWIS: The Center is a \$125 -- can you
21 hear me?

22 COMMISSIONER PETERMAN: Yes.

23 MR. LEWIS: Great. The Center is a \$125
24 million five-year program aimed at completing critical
25 research and development to develop a scalable prototype

1 that will use sunlight, water and carbon dioxide to
2 correctly produce clean carbon neutral sustainable
3 transportation fuel, both hydrogen and hydrocarbons, at
4 least 10 times more efficient than the most efficient
5 natural photosynthesis or biofuels ever conceived.

6 The Center was awarded after a rigorous and
7 expensive national competition that pitted more than a
8 dozen states against each other. It was called out as a
9 "true national clean energy innovation gem" in the State
10 of the Union Address by President Obama in 2011. And I'm
11 personally just really excited and proud that JCAP is
12 located in California, hoping the state realizes the
13 extensive regulatory policy and public commitment to and
14 fostering for clean energy and alternative fuels.

15 In addition, JCAP draws together top notch
16 scientists and high tech engineers from across our state.
17 And its proposal included two very important features
18 that influenced the Department of Energy during the whole
19 selection process, the first was State support from
20 California for new equipment under the sales tax
21 exclusion through the California Advanced Energy and
22 Alternative Transportation Authority. That was approved
23 last year and is going strong.

24 The second feature of our proposal was an
25 Energy Commission qualification from California, JCAP

1 eligibility for matching funding through the appropriate
2 section of the ARFVT's annual Investment Plan Program for
3 -- and I quote -- "research and development of low carbon
4 fuels including production of fuel directly from sunlight
5 and including efforts in the Department of Energy
6 Innovation Hub focused on fuels from sunlight located
7 fully in the State of California." Last year, JCAP
8 formally applied for these matching funds that were
9 influential in us beating these other states and being
10 selected for this national gem. That application has
11 been reviewed internally, but not yet forwarded to the
12 Legislature as required by 118. These funds were
13 included in the DOE competition and are needed to fully
14 outfit laboratory space for both CalTech and for our
15 Joint Center partner, the Lawrence Berkeley National
16 Laboratory.

17 The matching funds are fully expected to result
18 in accelerated progress on at least one of the parallel
19 tracks the Center is employing in its ambitious pursuit
20 of a prototype and specifically to help us generate
21 liquid fuels far more efficiently and cleanly than
22 biofuel, giving us alternatives to biofuels for clean
23 liquid valuable transportation.

24 The collaboration includes scientists from U.C.
25 San Diego, U.C. Irvine, and Stanford, as well as CalTech

1 and LBL, and is on its way to creating almost 200 new
2 jobs for highly skilled Californians. So I respectfully
3 ask for your favorable consideration in advancing the
4 JCAP proposal through this process so that we can get on
5 with our bold mission to maintain a world leading center
6 and train the next generation of energy leaders involved
7 with this revolutionary approach to clean sustainable
8 transportation fuel. California is the best place to do
9 this, we're so proud to be a part of it, and we hope that
10 we can continue to get the State commitment and support
11 for our efforts. Thank you.

12 COMMISSIONER PETERMAN: Thank you, Nate. Thank
13 you for your comments. Next, we'll have Paul Staples.

14 MR. STAPLES: Hello.

15 COMMISSIONER PETERMAN: Hello.

16 MR. STAPLES: Can you hear me?

17 COMMISSIONER PETERMAN: Yes, we can. Please go
18 ahead.

19 MR. STAPLES: Hi. Thank you for taking the
20 time, my name is Paul Staples, I'm Chairman and CEO of
21 HyGen Industries. We're developers of renewable
22 sustainable hydrogen energy projects and programs, and we
23 -- I first want to say on behalf of my company and my
24 team to thank you for the good work you did in developing
25 this current Investment Plan. Certainly, it is better

1 than last year's, so kudos to you and thank you very
2 much. Well, you know, I always start off with a
3 compliment, then you get to hear the other stuff.

4 COMMISSIONER PETERMAN: Go ahead.

5 MR. STAPLES: I thank you for it and it's a
6 good start. We do need more money in infrastructure
7 because the truth of the matter is, no matter what we do,
8 these vehicles aren't going to sell unless it's out
9 there, we know that and you've heard that a thousand
10 times. So we really need to actually over provide
11 infrastructure in order to give the public confidence
12 that the fueling will be there, so anything that you guys
13 can do to help expedite that and to do that, we are going
14 to be very very supportive of it. Now -- and so will
15 many others.

16 So anyway, the next thing I wanted to talk
17 about, the workforce training. Workforce training is
18 needed. I would suggest that we increase that, well, you
19 know, more than what it is at this point in time. We're
20 going to be putting together an Operation Maintenance and
21 Monitoring Program in association with our project that
22 is going to need technicians, engineers, preferably
23 veterans that are coming home from work -- from the war -
24 - to get training in the technical fields to help in this
25 area, and so this is going to be very important towards

1 actually providing the work force for any of these
2 things, as a matter of fact, not just hydrogen, but for
3 anything that is out there, we're going to need it. So
4 in this particular issue, I'm in sync with everybody else
5 and all their other fueling proposals that workforce
6 training is going to be needed. So I would say go for an
7 increase in that support. However, capital for putting
8 that -- okay, or for putting, you know, operation and
9 maintenance and someone else had mentioned, I think it
10 was a gentleman named Tyson, said that we need more O&M
11 funding, okay? And so we should take possibly from the
12 infrastructure to put it into that. That's putting the
13 cart before the horse, okay? Because you won't have any
14 O&M needed if the infrastructure isn't out there. So we
15 need that. Now, what I would suggest is that, in these
16 solicitations that you guys say to those that are
17 providing that, that it is okay to include operation and
18 maintenance for that, or the cost for that three year
19 period that you're requiring this to be up and running,
20 to be included as cost share in any proposal that anyone
21 submits because I think that would go a long way to
22 helping support the operation and maintenance aspects of
23 this program, and that would go a long way, as well as
24 the workforce training, combined with that, would give
25 more of a cushion for trained personnel to come into the

1 workplace, as well as providing the operation and
2 maintenance so that these systems are being watched and
3 being maintained and kept up. So that, I think, would be
4 a very good way to deal with the operation and
5 maintenance by any -- including in its cost share. Right
6 now, under the current RFP, I can't consider that as cost
7 share; anything after the installation is on my dime,
8 okay? And, you know, I understand that. However, it
9 would be helpful to at least allow us to cost share that,
10 to make that our participation of the cost share in the
11 other projects. So that is one of my recommendations on
12 that part right there. Yes, the capital deployment,
13 equipment deployment needs to be supported in the
14 beginning. The operation and maintenance will follow,
15 but, yes, we need to make sure that there is workforce
16 out there to support that and also that there is some
17 kind of funding support for it within the RFP that you
18 guys are putting out, which I thank you for the most
19 recent one. You know, especially in the recent one, you
20 know, because at the late date at this time.

21 Also, someone had mentioned fuel cell vehicles,
22 fueling for hydrogen center that I doubt you'll ever get
23 the fuel in less than six minutes, while the truth of the
24 matter is, they do fuel in under five minutes, okay? So
25 just as quickly as a gasoline vehicle fuels up. So that

1 is actually inaccurate that was mentioned, as well. So
2 that's -- those are some of the things that I wanted to
3 talk in reference to, and I also have a question. Due to
4 the late release of the current hydrogen RFP, if there
5 are enough good eligible projects submitted for funding
6 in the current hydrogen RFP, could some of this funding,
7 the \$11 million, be provided to support them? After all,
8 it is 2012 now and, you know, we didn't get an RFP in
9 2011 on hydrogen funding, so I'd just like to present
10 that and I know this isn't the RFP committee, but you
11 guys want to know how to help write the RFP, so I'm just
12 wondering if that's something that is on the table and
13 maybe that's a Board decision that's got to be made, but
14 I would like to encourage those on the Committee to
15 support that and recommend it to the Board.

16 COMMISSIONER PETERMAN: Okay, well, great.
17 Thank you for your comments. We have staff coming up now
18 to answer your last question and appreciate you calling
19 in. Hold on one second.

20 MR. STAPLES: Thank you.

21 MR. MCKINNEY: Yeah, Mr. Staples. Jim McKinney
22 here, Commission staff. As currently written, there is
23 no head room in the hydrogen solicitation.

24 MR. STAPLES: I see. Well, is it something
25 that you guys could recommend?

1 MR. MCKINNEY: Yeah, we can take that under
2 consideration.

3 MR. STAPLES: I would highly recommend it.
4 Anyway, thank you very much. Any other questions for me,
5 I'll be glad to answer them, otherwise, thank you.

6 COMMISSIONER PETERMAN: Okay, thank you very
7 much. Next, we have Alana Chaves-Langdon.

8 MS. CHAVES-LANGDON: Thank you very much. My
9 name is Alana Chaves-Langdon. I'm Vice President of
10 Government Relations and Regulatory Affairs for
11 Ecotality. Ecotality is headquartered in San Francisco
12 and we are a manufacturer of Smart Charging EVSE. We are
13 very appreciative of the continued partnership with CEC
14 on the EV project throughout California. We are
15 deploying residential public and DC Fast Charging
16 equipment in San Diego, Los Angeles, and the Bay Area.
17 We are also appreciative of the continued partnership
18 with Bay Area Air Quality Management District, our
19 Quality Management District, to expand the EV project in
20 California.

21 I just wanted to reiterate continued support by
22 the CEC for Fast Charging. Right now, we have over 4,000
23 participants in the EV project, more than half of those
24 are in California and those are individuals who have
25 purchased Nissan *Leafs* and Chevrolet *Volts* to drive and

1 are a part of this project. Most of those are the pure
2 BEV Nissan *Leaf* who are utilizing the current Fast
3 Chargers that we will be deploying, or have deployed in
4 those areas, that used the CHAdeMO standard.

5 It was brought up earlier that currently the
6 SAE is looking at developing an American Standard and I
7 just wanted to let everyone know that our EVSE is
8 designed with a dual port capability, so we have two
9 ports on our Fast Charger so that, if and when an
10 American Standard is adopted, we would be able to make
11 those appropriate changes if and when the time comes.
12 But as of right now, since there is a standard, the
13 CHAdeMO Standard in place, and current auto manufacturers
14 with cars on the road that are utilizing that standard,
15 we continue to request support, continued support, for
16 the Fast Charging infrastructure in California. Thank
17 you.

18 COMMISSIONER PETERMAN: Great. Thank you, Ms.
19 Langdon, for your comments. Next, we have James
20 Provenzano. James Provenzano, are you still on the line?

21 MR. PROVENZANO: Hello, can you hear me?

22 COMMISSIONER PETERMAN: Yes, we can. We can
23 hear you. Go on ahead.

24 MR. PROVENZANO: I'm sorry. I'm James
25 Provenzano and I'm President of Clean Air Now, and in

1 full disclosure, I'm also a very happy driver of a Honda
2 Clarity Fuel Cell Electric Vehicle. And I can't say that
3 with enough enthusiasm, I apologize for my monotone, but
4 Clean Air Now's focus is reducing the impact of air
5 pollution on public health. And given all the advantages
6 that are afforded by hydrogen energy technologies, I
7 would argue that the California Energy Commission would
8 not regret increasing the share allotted to hydrogen.
9 But with all that's been said, I want to thank you, and
10 keep up the great work. And I understand the cluster
11 approach to infrastructure development, and that should
12 continue; however, as a driver, I can say that providing
13 funding for connector and destination stations will
14 assist in the marketability of fuel cell vehicles. So
15 please keep that in your mind as you put out the
16 solicitations for these stations.

17 Also, it was stated, or it was referred, that
18 maybe by the CEC funding hydrogen stations that the oil
19 companies were being taken off the hook, so to speak, for
20 their potential investment in new infrastructure, which
21 has been encouraged by the new CFO Regulations and the
22 pending MOA. But if you follow that logic, then maybe by
23 funding charging stations for Battery Electric Vehicles,
24 then the taxpayer is letting the electric utilities off
25 the hook for things that they should be capitalizing.

1 So, we need to be careful for what we ask for. And also,
2 one issue on the Battery Electric Vehicle front, one of
3 the greatest arguments for their adoption, and I'm all in
4 favor of their adoption, was that they could be recharged
5 at home and at night using off-peak electricity, and that
6 no new infrastructure would have to be built, and no
7 additional pollution would be produced because the
8 turbines of the plants were (quote) "spinning at night,
9 producing waste and electricity anyway."

10 I am concerned what effect this new emphasis on
11 public charging stations and work location chargers will
12 have on that original benefit of the Battery Electric
13 Vehicle paradigm. So that's a concern to me and I want
14 to encourage the installment of chargers in places where
15 they're having issues such as multi-unit apartment
16 buildings and condominiums, helping them with the
17 permitting issues surrounding that, and I think that
18 would be beneficial.

19 I think also with -- Joe Norbeck, I believe,
20 stated a request for a public presentation of a cost
21 analysis of staff's recommendation, and we'd like to echo
22 that, but with the caveat that, well, in your full fuel
23 cycle analysis this starts to get addressed. But I agree
24 that a clear indication of dollars spent per kilogram of
25 potential criteria pollutants and greenhouse gas

1 emissions reduced would be helpful, that in showing the
2 State's leverage when you go out to full implementation
3 of these technologies, what leverage the state is able to
4 provide and providing dollars up front for these
5 technologies. And I think you'll find the gaseous fuels
6 will shine in that area.

7 And also, I'd like to echo the -- South Coast Air
8 Quality Management District has stated a desire to move
9 to the electrification of transportation and I want to
10 thank the CEC for assisting the state in moving toward
11 these highly efficient and low or non-polluting electric
12 drive trains. And thank you for your great great work,
13 and thank you for helping clean the air for everyone.
14 Thank you.

15 COMMISSIONER PETERMAN: Great, James. Thank
16 you for your comments and listening today. And finally,
17 we have Beverly Bradshaw. Is she on the line?

18 MS. BRADSHAW: Yes, I am. Thank you.

19 COMMISSIONER PETERMAN: Welcome back, Beverly.

20 MS. BRADSHAW: Thank you. My name is Beverly
21 Bradshaw and I'm with Best, Best & Krieger, and we
22 represent Victor Valley Waste Water Reclamation
23 Authority. Our client just has some comments and we just
24 wanted to get them on the record, they're pretty short.
25 So I'll be short and sweet. Anaerobic digestion produces

1 fuel and energy utilizing biomass produced from waste
2 water treatment plants, dairy farms, and food waste. The
3 State of California has experienced a significant
4 increase in these types of energy products as evidenced
5 in the Self-Generation Incentive Program application
6 administered by Southern California Edison. To
7 intentionally craft energy policy, which would exclude or
8 hamper this form of renewable energy would be detrimental
9 to these projects.

10 The California Association of Sanitation
11 Agencies which represents 95 percent of the waste water
12 treatment plants in the State of California has a ton of
13 more information on this issue, and we actually recommend
14 you to contact them for more information. Anaerobic
15 digestion occurs in more than just landfills and
16 represents a significant opportunity for local
17 communities to produce energy. That's all I have to say.
18 Thank you very much.

19 COMMISSIONER PETERMAN: Thank you very much.
20 And one more caller on the line, Warren Smith.

21 MR. SMITH: Hi, this is Warren. Thank you for
22 the chance to speak in front of you. I first want to
23 echo all the nice comments about the staff and their hard
24 work that they've put into this plan, and all the work
25 that you've done in the past. We're a fortunate

1 recipient of grants for pre-development work on AD
2 projects and those projects, all but one, were deemed to
3 be feasible. They are generally smaller projects, not
4 the large system projects that can compete with
5 landfills, and you know, I just want to provide a couple
6 comments about the plan and urge the committee to think
7 about a delineation of projects on pre-landfill vs.
8 landfill.

9 I'll give you a couple examples. We're in the
10 process of constructing our first project. As some of
11 you may know, this technology that we own and license and
12 benefit U.C. Davis, it's actually funded by PIER
13 originally, Dr. Zhang's work was originally funded, and
14 it's now getting into the market. This first project is
15 a 10-ton a day project and it'll open the first week of
16 March. But the second project is really the relevant
17 project to this Committee, and it's a 25-ton a day
18 facility that will start construction on March 15th. It
19 will open at the end of May, creating compressed natural
20 gas fuel for nine and a half trucks a day for a local
21 hauler that operates a food collection program here in
22 Sacramento. We're very excited about being able to
23 deliver. Both these projects are privately funded and
24 we're finally starting to see some real momentum in the
25 development of anaerobic digestion projects, especially

1 all the way upstream where the waste is created. So
2 obviously if we can locate projects like this at
3 locations where actually waste is created, and we can use
4 the fuel in creative ways, then ultimately we're lowering
5 greenhouse gases, especially with transportation and
6 ultimately the use.

7 But I urge you to think about really what's
8 happening in the State, just -- I agree with you that --
9 I'm just thinking that maybe one of the reasons you've
10 chosen not to fund AD is that you funded AD in the past
11 and, yes, we've proven that we can create biogas, but we
12 really need to start to think about how we actually get
13 biogas to customers and ultimately how we can actually
14 allow this biogas for broader use. And my concern is
15 that, in the plan the way it is written is we're
16 currently -- it incentivizes the direction of organic
17 waste to landfills. So, you know, we need to continue to
18 try to find ways to manage upstream and put in projects
19 upstream that actually make sense. One particular
20 project that is currently under development for us is a
21 large anaerobic digestion project, the chicken manure
22 project that ultimately will create 1.5 million standard
23 cubic feet a day of biogas. It's roughly the equivalent
24 of 8,000 gallon equivalents. We have a real challenge in
25 this project in actually figuring out what we do with the

1 biomethane, and I think while we can create biomethane,
2 we really have to think about how we can actually get it
3 to customers. And so since most of these projects are
4 going to be located in the Central Valley or, you know,
5 some type of agricultural facilities that can create that
6 kind of gas, we really need to find ways to actually get
7 the biogas into the existing gas infrastructure. While
8 we all know that biogas can be entered into the gas
9 systems, the utilities in California are generally not
10 all on the same page, they all have different standards,
11 and ultimately it makes it very very difficult to
12 actually work and come up with a way to actually get
13 biogas into the network.

14 So we are particularly focused on being able to
15 deliver biogas into the gas network long term, we think
16 it ultimately commoditizes the product, and ultimately
17 allows it to get some much higher value and ultimately
18 can get to the customers.

19 And the last thing is, you know, obviously
20 there is -- we're still awaiting some hopefully positive
21 news on a pathway for AD. My gut tells me that if
22 landfills have a mark at 11, that AD would be below that,
23 which would then be the cleanest burning fuels in the
24 market and we need to maximize our opportunity in
25 California. I think I saw a report where there was over

1 300 million gallon equivalents of biomethane that could
2 be created in the state. That's a big big impact and
3 what we're hopeful for is that, over the next 10 years,
4 is that market is truly realized and, so, I again want to
5 thank the staff and I want to thank the relationship with
6 the CEC and all the good work that you're doing, and look
7 forward to continuing to provide comments on this plan
8 later.

9 COMMISSIONER PETERMAN: Thank you for your
10 comments. We've got a comment from staff, as well.

11 MR. MCKINNEY: Yeah, Mr. Smith. Jim McKinney
12 here, Commissioner staff. I think we're going to have to
13 go back and look at how we wrote that particular section
14 in the Investment Plan, we are not changing Commission
15 policy on biogas eligibility. We recognize and welcome
16 anaerobic digestion projects, especially the smaller
17 scale projects. All we attempted to do was to create
18 some efficiencies and a little more competition amongst
19 the fuel groups in the biofuels category. So that's all
20 we were trying to do. Staff will go back and look at that
21 language and make sure it's completely clear.

22 Secondly, to your comment about gas quality
23 standards for biogas, we fully recognize that issue and
24 also see it as a barrier to market entry for this fuel
25 product. So, thanks.

1 COMMISSIONER PETERMAN: Great. I think that's
2 the end of the public comment. Just to remind everyone,
3 written comments are requested to be submitted by
4 February 24th. This is the first, but not the last
5 Advisory Committee Meeting we'll be having on this
6 Investment Plan. I think this was a very successful
7 meeting. In the future, we'll schedule it for a bit
8 longer so that we continue to hear all the comments and,
9 even though we went a bit further past lunch than I
10 anticipated, I am glad that we pushed through, a
11 tremendous amount of food for thought, this was very
12 productive for me to be involved in and I look forward to
13 seeing staff's next iteration of this draft. So I'll
14 turn it -- and, again, thank you to the Advisory
15 Committee for your participation and your service. We
16 look forward to your assistance over the next few months
17 as we finalize the Plan. I can't say thank you enough to
18 staff for the hard work they put into this. As you've
19 heard during today's meeting, they've worked on this
20 Investment Plan, they are working on current
21 solicitations, they're working on Benefits Reports, and
22 so they are working overtime, in fact, to continue to
23 advance the State's clean energy and clean transportation
24 agenda. So I'll turn that over to staff for any final
25 comments.

1 MR. PEREZ: Thank you very much, Commissioner
2 Peterman and we are very pleased that you are now
3 confirmed and with us permanently, to provide us guidance
4 and leadership as we move forward. So I want to, on
5 behalf of staff, thank you for taking on this mission and
6 we look forward to working with you as we move through
7 the next phases of the development of this Investment
8 Plan. Also would just like to thank the Advisory
9 Committee members, and particularly our new members
10 today. So, it's very exciting to have you on board, as
11 well as the public, the many comments we received today,
12 there's a lot to sort through, but very appreciative of
13 all the input we received today and we look forward to
14 your written comments, too.

15 COMMISSIONER PETERMAN: Great. So with that,
16 the meeting is adjourned. And have a happy weekend.

17 [Adjourned at 2:37 P.M.]

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