

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT

COMMISSION OF THE STATE OF CALIFORNIA

California Energy Commission

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In the Matter of:)

2015-2016 Investment Plan Update) Docket No. 14-ALT-01

)

MEETING AND PUBLIC WORKSHOP REGARDING ALTERNATIVE AND
RENEWABLE VEHICLE TECHNOLOGY PROGRAM

SAN JOAQUIN VALLEY AIR POLLUTOIN CONTROL DISTTRICT

CENTRAL REGION OFFICE

1900 EAST GETTYSBURG AVENUE

GOVERNING BOARD ROOM

FRESNO, CALIFORNIA

THURSDAY, FEBRUARY 12, 2015

10:00 A.M.

Reported by:

Jacqueline Denlinger

APPEARANCESCOMMITTEE MEMBERS

Janea Scott, California Energy Commission

Jack Michael, Recreational Boaters of California

Charles Smith, California Energy Commission

Erik White, Air Resources Board

Joe Gershen, California Biodiesel Alliance

Jim McKinney, Program Manager, California Energy Commission

Joy Alafia, Western Propane Gas Association

Peter Cooper, Employee Training Panel

Steve Cliff, Caltrans

Will Coleman

Bonnie Holmes-Gen, American Lung Association of California

Tim Carmichael, California Natural Gas Vehicle Coalition

Eileen Tutt, California Electric Transportation Coalition

John Sheers, Center for Energy Efficiency and Renewable Technologies

PUBLIC SPEAKERS

Todd DeYoung, San Joaquin Valley Air Pollution Control District

Jacob Orenberg

Michael Rivera, Office of Assembly Member Perea

Mike Lewis, Pearson Fuels

Bill Bunnell

Russ Teall, Biodico

Thomas Green

APPEARANCES (CONTINUED)

PUBLIC SPEAKERS (CONTINUED)

Tyson Eckerle, Governor Brown's Office of Business and
Economic Development

Michael Coates, Mightycomm

Ralph Knight, Napa Valley Unified

P R O C E E D I N G S

10:32 A.M.

PROCEEDINGS BEGIN AT 10:32 A.M.

(The meeting was called to order at 10:32 a.m.)

FRESNO, CALIFORNIA, THURSDAY, FEBRUARY 12, 2015

MEETING BEGINS AT 10:32 A.M.

PRESIDING MEMBER SCOTT: Well, good morning everybody. Thank you so much for joining us for our Advisory Committee meeting for the Alternative and Renewable Fuel and Vehicle Technology Program. I'm Commissioner Janea Scott and I'm the lead at the Energy Commission for Transportation. It's great to have all of you join us.

I wanted to do a special warm welcome for Michael Rivera from Assembly Member Perea's office. Thank you so much for joining us.

Do we have any other folks from other offices? Okay. Just checking.

Why don't we go ahead and we'll go around the table to do introductions of the Advisory Committee members who are here. And then when we're finished with that we'll go to the phone to see what Advisory Committee members are on the WebEx.

And I'll just let you know, I had a note from Bonnie Holmes-Gen and from Tim Carmichael. And they're on the train and the train is running a little bit late. So as soon as it gets here they will get here too.

1 So would you like to start?

2 COMMITTEE MEMBER MICHAEL: Jack Michael representing
3 the Recreational Boaters of California.

4 PRESIDING MEMBER SCOTT: And up here at the table
5 there's a little button right next to the red light, and it
6 will tell you if your mike is on or off.

7 COMMITTEE MEMBER SMITH: Charles Smith with the
8 Energy Commission, Project Manager for the 2015-2016
9 Investment Plan Update.

10 COMMITTEE MEMBER WHITE: Erik White with the Air
11 Resources Board on behalf of Alberto Ayala who couldn't make
12 it today.

13 COMMITTEE MEMBER GERSHEN: Joe Gershen on behalf of
14 the California Biodiesel Alliance.

15 COMMITTEE MEMBER MCKINNEY: Jim McKinney with the
16 Energy Commission staff. I'm Program Manager for the
17 Alternative and Renewable Fuel and Vehicle Technology Fund.

18 PRESIDING MEMBER SCOTT: And do we have Advisory
19 Committee members on the WebEx?

20 COMMITTEE MEMBER SMITH: Jacob, maybe you can unmute
21 all for a moment.

22 COMMITTEE MEMBER ALAFIA: Hi. This is Joy Alafia
23 from the Western Propane Gas Association, hoping to join you
24 in person shortly.

25 PRESIDING MEMBER SCOTT: Great. Welcome, Joy.

1 COMMITTEE MEMBER COOPER: Hi. This is Peter Cooper
2 from the Employee Training Panel.

3 PRESIDING MEMBER SCOTT: Good morning Peter.

4 COMMITTEE MEMBER COOPER: Good morning.

5 COMMITTEE MEMBER TYSON: This is Tyson Eckerle with
6 the Governor's Office of Business and Economic Development.

7 PRESIDING MEMBER SCOTT: Good morning Tyson.

8 COMMITTEE MEMBER TYSON: Good morning.

9 PRESIDING MEMBER SCOTT: Others? Any other Advisory
10 Committee members? Okay.

11 Well, we will go ahead and get started here. I just
12 also want to say a nice thank you to the San Joaquin Valley
13 Air Pollution Control District for hosting us here today.
14 We're just delighted to be here and to do our meeting here in
15 Fresno. And so thank you for hosting us.

16 And actually, we are going to turn to Todd DeYoung
17 from the Air Pollution Control District, and he's going to
18 give us a little bit of information about the San Joaquin
19 Valley.

20 MR. DEYOUNG: Thank you very much and good morning.
21 I assume the mike is on over here. First of all, welcome, on
22 behalf of our Executive Director Seyed Sadredin who
23 unfortunately couldn't be here today. We appreciate the
24 opportunity to host not one but two state agencies here in our
25 district. I think it's a wonderful. There you go. Thank you

1 (inaudible). Anytime we can get state agencies down here and
2 really engage the valley in our unique circumstances, we -- we
3 revel in that opportunity and we very much appreciate
4 everyone's attendance today, so thank you very much for
5 coming.

6 I do want to give just a brief sort of synopsis of
7 some of the activities that we have going on related to
8 incentives and alternative fuel. So if you'll bear with me
9 I've just got a brief presentation that I'm going to run
10 through.

11 So since 1992 the Valley Air District has adopted
12 more than 500 rules and regulations targeted primarily at
13 stationary sources. These rules are often the first of their
14 kind and are generally considered the most stringent rules in
15 California and sometimes the nation. However, currently 80
16 percent of the NOx inventory in the valley is attributed to
17 mobile sources. There are several reasons for that, and I'll
18 go through those.

19 The first and most impactful is -- if the valley's
20 geography and topography. Obviously, we're in a giant bowl
21 here. And the climate, with summer and winter inversions and
22 prolonged periods of stagnation, we get significant buildup of
23 emissions in the valley that are hard to -- hard to get rid
24 of.

25 Along with that we have two major transportation

1 corridors that bisect the valley with Interstate 5 and Highway
2 99 that connect the northern and southern parts of the -- of
3 the state. So it makes it -- it makes it difficult with
4 the -- with the transportation.

5 Couple that with -- with high poverty and
6 unemployment rates that we see here in the valley and a large
7 number of disadvantaged communities, it really calls for a
8 unique strategy.

9 The District has developed a broad multifaceted
10 portfolio of innovative strategies to address the impact of
11 mobile sources, and I'll go through those here briefly. There
12 we go.

13 Again, since 1992 the District has operated our
14 voluntary incentive programs. And during that time more than
15 \$1.2 billion has been invested in the valley. That's a
16 combination of public and private investment. Of that amount
17 \$676 million has come from the District and has gone towards
18 emission reduction mobile source projects. These projects
19 have garnered over 116,000 tons of lifetime emission
20 reductions.

21 The District is consistently lauded during program
22 evaluations at the state and federal level for our efficiency
23 and effectiveness in operating our incentive programs. And we
24 currently operate a broad range of innovative programs. In
25 fact, we currently operate a couple of different programs on

1 behalf of other air districts in the state, as well as the
2 State Air Resources Board.

3 Our current programs include our heavy-duty engine
4 programs, our heavy-duty on-road programs include the state's
5 Proposition 1B program. And we've primarily used Proposition
6 1B funding to replace aging valley trucks. The Carl Moyer
7 Voucher Incentive Program is another state-funded program that
8 we've operated in the past, targeted at small fleets, smaller
9 trucking fleets. We -- the District's own Truck Voucher
10 Incentive Program is funded with local funding here in the
11 valley, again targeted at small business in the valley, really
12 focused on those -- on those small fleets in the valley in
13 truck replacement.

14 We operate -- this past year we've operated the H-
15 VIP Plus-up Program which is the Hybrid Voucher Incentive
16 Program, Plus-Up. The HVIP Program is a state-run program
17 that provided funding to offset the incremental cost of
18 alternative fuel and other advance-technology vehicles, heavy-
19 duty vehicles in the state. We put money on top of that,
20 that's the Plus-up part of it, to encourage those -- those
21 trucks to come here to the valley. It was a very successful
22 program. We -- we put in \$2 million during the last fiscal
23 year into our program, and we funded -- we funded 105 trucks,
24 18 of those being all electric trucks, and 87 -- the 87
25 remaining were advance-technology hybrid trucks.

1 We're operating a School Bus Replacement and
2 Retrofit Program. We have for several years. And currently
3 we're operating the Statewide School Bus Retrofit Program on
4 behalf of the Air Resources Board. We've done that for
5 several years and we're going to continue to do that for the
6 next fiscal year.

7 And this District has really been, because of the
8 high -- high number single-owner operators and small trucking
9 fleets in the valley, we've really been a leader in pushing to
10 ensure that small fleets have access to these much needed
11 incentive funds. And that started with -- with putting our
12 own money into the -- the truck voucher program in this past
13 fiscal year, a very successful program. We allocated over \$10
14 million to that program and helped out numerous small trucking
15 fleets in upgrading to cleaner -- cleaner vehicles.

16 Some of our other programs, and you can imagine,
17 off-road, farm-related equipment. Agricultural irrigation
18 pumps is a huge business here in the valley. We've -- we've
19 electrified well over 2,000 ag pump engine. We've replaced
20 over 5,000 additional engines with new cleaner burning diesel
21 engines. Our Agricultural Equipment Replacement Program is
22 right now one of our most popular programs. This is targeted
23 primarily at farm equipment, including tractors and other
24 implements that are used on farms. We've -- we've replaced
25 well over 2,000 pieces of agricultural equipment to date in

1 that program.

2 And we've also had some locomotive funding from time
3 to time. And we've -- we've purchased and replaced some --
4 some switcher locomotives that are operated in rail yards, as
5 well as some short-haul locomotives, through that program.

6 Some of our light-duty programs targeted at
7 passenger vehicles include our Drive Clean Rebate Program.
8 This is a program that offers up to \$3,000 that can be
9 overlaid on top of the state's CVRP funding which -- which
10 creates a \$5,500 incentive, which we believe is the most
11 lucrative rebate program, once you layer those two, in the
12 entire state. It's been wildly successful. We've -- we've
13 provided rebates for over 2,000 vehicles in the past year-and-
14 a-half. You know, it's really taken off over the past
15 probably eight to ten months where we've seen huge numbers
16 of -- of primarily electric vehicles come into the valley,
17 which is -- which is something that we've been -- we've been
18 lagging behind in the rest of the state. So it's -- it's
19 definitely a step in the right direction.

20 The Tune In and Tune Up Program is another
21 innovative program that the District operates. This is based
22 on a weekend event model where we have weekend repair events.
23 So low-income folks can drive down to a local gathering place,
24 usually at a fairgrounds or a community college. They can get
25 their vehicle tested. And if their vehicle fails that test

1 they can be issued a voucher for smog-related repairs right
2 there. It's been an incredibly successful event. We have --
3 we're generally operating about 24 to 26 events per years.
4 Excuse me. And we're generally testing between 500 and 525
5 cars per event and issuing 300 to 400 vouchers per event for
6 repairs.

7 The great thing about this program, one of the side
8 benefits is that folks that were previously unregistered are
9 becoming registered through this program. It's something like
10 a 98 percent success rate of those folks that were
11 unregistered come into the program, get repaired, and then go
12 through that registration process. It's -- it's been a
13 fantastic program for us. And there are some other things
14 happening with that program that I'll talk about in our
15 upcoming -- upcoming events.

16 Our Remove Program is one of our oldest, oldest
17 programs. This is really aimed at VMT reduction-type program,
18 bike paths, park-and-ride vanpools, we all -- we operate
19 those -- those incentive programs through our remove program,
20 and then other types of innovative VMT reduction projects.

21 The last thing is EV Readiness Planning, the result
22 of a wonderful grant that we were able to obtain from the
23 California Energy Commission. We went through a process to
24 develop and EV Readiness Plan in the valley. There are
25 several members of -- of the public here who participated in

1 that program. And we have a very robust and comprehensive
2 plan. We were able to identify the barriers to more
3 widespread EV adoption here in the valley. The next step is
4 to take that plan and implement it.

5 And again I am happy to say that thanks to another
6 California Energy Commission grant that we just received word
7 that we were granted we will be taking the first steps in
8 implementing that -- that EV Readiness Plan with some outreach
9 events and some -- some training opportunities, both for local
10 governments and for electrical contractors on the installation
11 of electric vehicle charging infrastructure. So we'll be
12 kicking off that grant very shortly.

13 Some of the other community programs, right now one
14 of our most popular programs, due to the time of the year, is
15 our Burn Cleaner Rebate Program. This is a program that
16 provides incentives for valley residents to upgrade their
17 older uncertified dirty fireplaces and wood stoves with new
18 cleaner technology, EPA Certified technology. The rebates are
19 currently at \$1,000, and they go up. We have higher
20 incentives for -- for low-income valley residents to ensure
21 that they have the opportunity to access these funds.

22 Our Clean Green Yard Machine Program has been
23 successful. This provides rebates to folks who crush their
24 old high polluting gas-powered lawnmowers and go with new
25 electric models. So it's a rebate program and it's ongoing,

1 and it's been -- it's been very successful, as well.

2 We -- we launched a couple of years ago our Public
3 Benefits Grant Program. This is targeted towards public
4 agencies for projects that benefit the public. We have three
5 components under that. We have a light-duty vehicle component
6 in which public agencies can get funding up to \$20,000 per
7 vehicle for advanced technology vehicles, and that includes
8 plugin hybrids and all electric alternative fuel, they can get
9 up to \$20,000 per vehicle to replace those vehicles.

10 We have two RFP-based components. Our -- the first
11 one is our Alternative Fuel Infrastructure Component. We have
12 funded CNG and LCNG stations, new stations as well as
13 expansion projects throughout the valley through that program.
14 We expect to issue another RFP for that program in the coming
15 fiscal year.

16 The Enhanced Transportation Strategies is another
17 RFP-based program component that we operate. We just recently
18 had a solicitation for that program and we're currently
19 evaluating the projects. That includes things like advanced
20 technology, transit, bus rapid transit, and those types of
21 projects.

22 And then finally our Technology Advancement Program.
23 Our technology advancement program includes a wide variety of
24 innovative technology, things that are not necessarily market
25 ready but ideas and technology that has promise and the hope

1 of more widespread adoption. So we're currently evaluating
2 our most recent solicitation under the technology advancement
3 program, as we speak. That program, I believe, had \$5 million
4 for this particular solicitation period.

5 So we do have a couple of programs under development
6 of note, the first one being Electric Vehicle Charging
7 Infrastructure, and this goes hand in hand with our -- our
8 Electric Vehicle Readiness Program that we've been -- that
9 we've been implementing here in the valley. The first two
10 segments that we're targeting are electric vehicle charging
11 infrastructure at public buildings, government buildings,
12 libraries, city halls, things like that, and then workplace
13 charging, this would be public charging. We plan to operate
14 the -- the public buildings through our Public Benefit Grants
15 Program as another first come, first served component where
16 public agencies will be able to come to the District at any
17 point during the year and receive funding to install electric
18 vehicle charging infrastructure. The workplace charging
19 infrastructure we are proposing to operate through our Drive
20 Clean Program as a rebate where they would install the -- the
21 technology at the office or shopping center and then come to
22 the District for a rebate. We hope to have those programs up
23 and running this spring. They're in development right now, so
24 they should be -- they should be out on the streets within the
25 next couple of months.

1 And then the Enhanced Fleet Modernization Program,
2 or EFMP, is a program that's run through the state. And we
3 have at the District, through our Tune In and Tune Up Program,
4 we've shown a model that -- that we've proposed to the State
5 Air Resources Board to -- to run the EFMP program in a similar
6 way to our Tune In and Tune Up Program, the idea being that
7 there are vehicles out there that are not necessarily good
8 candidates for repair. And we'd like to offer an additional
9 incentive amount to get those folks out of those vehicles and
10 get them into a newer cleaner vehicle all together.

11 So the EFMP program provides funding to -- to shift
12 those folks from an older dirty car that may not be -- may not
13 be worth repairing and get some into a cleaner car. This
14 includes the EFMP Plus-up Program which is an overlay on top
15 of the EFMP program which -- which would provide even
16 additional funding on top of EFMP to those folks that chose an
17 advanced technology vehicle, either a hybrid, electric or --
18 or a plugin hybrid vehicle.

19 So when you couple all of those -- all of those
20 rebates and incentives together it starts to look pretty good
21 in terms of -- of getting folks out of their old dirty
22 vehicles and into an advanced technology vehicle. I think the
23 last time we -- that we looked at it, if you -- if you layer
24 all the incentives it could be up to \$13,000 that -- that
25 somebody could receive to -- to get into a hybrid or an

1 advanced plugin electric vehicle hybrid.

2 So again, we're your -- we're your valley partners.
3 We're here. We're a regional agency. We're located in the
4 valley. And in terms of advocacy and going after the funding
5 that we're going to be discussing today, we really want to
6 become a resource for the region to assist you in developing
7 projects, going after funding, technical analysis, you know,
8 implementing the -- implementing the different funding
9 sources. You know, we're here to help. We want to be -- we
10 want to be that agency that -- that is sort of a clearing
11 house that -- that you can come to and we can discuss projects
12 and partnerships and different types of -- of ways to make
13 sure that the valley is well represented and that we're able
14 to take advantage of the funding that we're talking about. I
15 mean, it's -- it's significant funding that we're dealing with
16 and we want to make sure that the valley is well represented
17 in any funding opportunity.

18 So with that I'm going to provide my contact
19 information. I actually have some business cards, and I
20 can -- I can make some copies of this presentation for anybody
21 that would like it. So you don't have to scribble that down.
22 Just -- just approach me and I can get you my contact
23 information. And you can feel free to contact me about any of
24 the programs that we talked about today or any of the new
25 programs that we may discussing through this workshop.

1 So with that I'd be happy to answer any questions or
2 take any comments.

3 PRESIDING MEMBER SCOTT: Do we have any questions
4 from Committee Members?

5 UNIDENTIFIED MALE: I've got a question.

6 PRESIDING MEMBER SCOTT: All right. We want to --
7 we want to just do the Committee Members for now. But if you
8 don't mind, I'll ask --

9 UNIDENTIFIED MALE: I thought you said community
10 members.

11 PRESIDING MEMBER SCOTT: Oh, sorry. I'll ask if
12 Todd DeYoung will follow up with you though.

13 MR. DEYOUNG: Absolutely.

14 PRESIDING MEMBER SCOTT: So thank you so much for
15 that terrific presentation and again --

16 MR. DEYOUNG: My pleasure.

17 PRESIDING MEMBER SCOTT: -- for hosting us.

18 MR. DEYOUNG: My pleasure.

19 PRESIDING MEMBER SCOTT: And let me turn it over
20 to -- I think Jim McKinney is next.

21 COMMITTEE MEMBER MCKINNEY: Good morning everybody.

22 Let me first echo Commissioner Scott's appreciation to the
23 San Joaquin Valley Air Pollution Control District for hosting
24 us today, to Seyed Sadredin. Todd, thank you for the
25 information discussion.

1 I'm Jim McKinney. I'm Program Manager for the
2 Alternative Renewable Fuel and Vehicle Technology Fund.
3 Hopefully that's the last time I'll say the -- the title
4 today.

5 And I'd like to introduce some of the other members
6 of the Energy Commission, Staff and Leads that are here today.
7 So we've got Jacob Orenberg who is Assistant Project Manager
8 for the Investment Plan. Tim Olson, a fellow manager in our
9 Transportation Division, going to merging as Policy Lead for
10 biofuels efforts. Kristen Driscoll, Advisor to Chairman
11 Robert Weisenmiller, and Al Estrada who is the supervisor
12 for -- for Jacob and Charles and is in charge of the
13 Investment Plan. So again, I want to say thanks very much,
14 and welcome to our meeting.

15 So we're -- we've done introductions and opening
16 remarks. And I'll go through the -- what we call the program
17 status update. And the purpose of this is to inform members
18 of the committee and members of the public how we're using
19 ARFVTP funds that have been allocated to us for administration
20 on behalf of the state.

21 So I'd like to start with a sense of scale. This is
22 what we call our nation-state statistics. And I think some of
23 you are familiar with these. But again, a very large
24 population. We have the eighth largest economy at the global
25 scale. And we had a large source of greenhouse gas emissions

1 for North America, and again on a global scale. Air
2 pollutions, I think most people know, were in severe
3 nonattainment for NOx here in the San Joaquin Valley, and for
4 the South Coast Air Basin. We have an extremely large vehicle
5 fleet, over 28 million vehicles total, so 27-plus vehicles
6 light-duty and about 1 million trucks. We are the largest --
7 one of the largest fuel markets in the world. We cycle about
8 18 billion gallons of transportation fuel each year, and
9 that's on-road transportation, 14.5 is gasoline and that
10 includes over a billion gallons of ethanol at the E10 blend
11 level and about 3.5 billion gallons of diesel.

12 And one thing I'll come back to is that that -- that
13 truck figure, that 1 million, that's about three percent of
14 the total fleet, that's the part of the fleet that consumes
15 almost all of the diesel fuel. And that's the source for
16 particulates, NOx, SOx, and some of the other harmful
17 pollutants that we get from vehicle exhaust, a lot of roadways
18 as well.

19 I think first we want to extend our appreciation to
20 Assemblyman Perea and his leadership in getting AB 118
21 reauthorized in 2013. So we are a program funded through
22 small surcharges on everybody's vehicle registration fee.
23 It's a joint program administered by us, and we cover fuel
24 production, infrastructure development, and vehicle technology
25 development. Our colleagues are represented by Erik White

1 today with the California Air Resources Board, administer the
2 Air Quality Improvement Program, and they handle vouchers for
3 commercial vehicles. And they'll have a large slug of
4 greenhouse gas reduction fund monies that will go into large-
5 scale technology development demonstrations. And I think
6 Charles will talk more about that in his presentation.

7 By the end of this authorization period the Energy
8 Commission will have cycled \$1.5 billion in public investments
9 into companies in California that are working to develop the
10 low-carbon, low-emission technologies that we need to meet our
11 carbon and air pollution control goals. The Air Board will
12 cycle about half a billion. So in total about \$2 billion for
13 public investment.

14 These are some of the policy drivers. We are
15 primarily a carbon reduction program. That's really the
16 emission specified in legislation. And I think most of you
17 are kind of familiar with these numbers. About a 30 percent
18 reduction from the 1990 baseline by 2020, and an 80 percent
19 reduction by 2050. We have petroleum reduction goals, 15
20 percent below '03 by 2020. The low-carbon fuel standard which
21 is a critically important part of our state's efforts to
22 reduce carbon, as well. At the federal level the Federal
23 Renewable Fuel Standard Program is another big driver for
24 carbon reduction in fuels.

25 Air quality. So when I first learned these air

1 quality targets it really startled me. So to meet the Federal
2 Clean Air Act standards in 2023 and 2032 we're going to need
3 up to an 80 percent reduction in NOx emission levels from the
4 transportation sector, and that's a really serious challenge.
5 And again, it's going to hit, I think, primarily in the San
6 Joaquin Basin and the South Coast Air Basins. This is a
7 mandate, so we need to accommodate up to 1 million electric
8 vehicles by 2020. And the Governor's goal is to have 1.5
9 million electric vehicles on the road by 2025. In Governor
10 Brown's State of the State speech in January this year, he
11 threw out some more markers. So for our sector a 50 percent
12 reduction in petroleum use by 2030. So again, California has
13 leadership, not just in North America in the U.S. but on a
14 global scale, as well.

15 What this slide shows is kind of the way that the
16 money flows through our program and through the process. So
17 today is a very important part of how this money gets
18 allocated. So Staff makes a series of recommendations and we
19 present that to two public Advisory Committee meetings. This
20 is the second of those. After Commissioner Scott takes
21 control of the report and takes a Commissioner's report to the
22 business meeting, that is our formal request to the five
23 members of the Energy Commission. And when that's approved we
24 then go to the solicitation level.

25 So we take those segments of money for each

1 technology area and develop competitive solicitations for
2 that. We go through a screening and proposal review process
3 and ranking. And -- and then we get down to the agreement
4 level. So we negotiate the grant agreements with everybody.
5 And then the rest of it, agreement management, survey and data
6 collection, and then what we call the benefits report which
7 I'll touch on briefly. So it's typically a six-year process,
8 two years to liquidate, four years -- no, two years to
9 encumber, excuse me, and then four years to liquidate the
10 funding.

11 One part of AB 8 that's new is a benefit cost score.
12 So this is something that we pay increasing attention to.
13 This is incorporated into all of our solicitations now and,
14 again, that takes place at the solicitation level.

15 So this is where we are in terms of funding. Last
16 year we hit the half billion dollar mark in public investments
17 through ARFVTP. We're now coming up on \$550 million, coming
18 up on 500 projects, we've got 470. And you can see how the
19 money is allocated here. So about 30 percent each to about
20 biofuels and electric drive, about 17 percent each to natural
21 gas and hydrogen. Workforce development is a very important
22 part of our program. And we're trying to train the
23 technicians, the equipment operators, maintenance personnel
24 that can maintain and operate these technologies of the
25 future. Market and program development, those are our tech

1 support contracts to assist us on various parts of our program
2 administration.

3 This is another way to look at it. This is -- the
4 other one was by fuel supply, and this is by supply chain
5 phase. So on the far left, the red and gold bars, that's our
6 biofuels investments. So on \$130 million total you can see
7 the breakout, biodiesel, biomethane, and then ethanol.

8 Refueling infrastructure, hydrogen has now become
9 the predominant part of that for us. That's the turquoise
10 bar, I guess that would be. Green is our electric drive
11 investments. The yellow or gold is our ED5. Purple is
12 natural gas. And a little bit on the top there, biodiesel,
13 that's kind of at the bulk terminal scale.

14 For vehicles it's about an even split between our
15 electric vehicle investments and -- and natural gas trucks.
16 There's a little bit on hydrogen. We've got a few
17 demonstration projects there, and a little bit on propane as
18 well.

19 Most of our manufacturing grants tend to go to the
20 electric drive sector, so that's component share, assembly
21 lines, and full vehicle development. And then on the far
22 right again you can see the -- the disbursement of our
23 workforce development under their program support funds.

24 One of the things that we wanted to do is show how
25 the money is distributed geographically. So what this chart

1 shows is we've got kind of the major air districts in
2 California. And we've tried to show, you know, what our
3 investments our on a dollar basis in each of these air
4 districts, so that's the -- the second column there. To the
5 right of that, percent of total, so that's the percentage of
6 our funds. And to the right of that I added a new column this
7 year. So percent of state population. So in percent state
8 population and percent of total funding are equal or about
9 equal, that means there's about an even, you know, kind of
10 inflow-outflow. To that number -- that number are the
11 populous that are paying the registration fees, rolling up to
12 the -- the state fund that we administer, and then going back
13 to those air districts.

14 So you can see that the Bay Area is about equal.
15 Monterey is getting a little bit less in its population share.
16 Sacramento is running about equal. Santa Barbara is getting a
17 little bit less than its population share. San Diego, about
18 five percent less than its population share.

19 The San Joaquin region here, so getting about 14.7
20 percent of total funding and has about 10 percent of the
21 population. And I think this is really important to highlight
22 because we're really trying to target increasingly the, you
23 know, the two main air districts with severe, you know, non-
24 attainment issues, disadvantaged communities. So I think this
25 indicates that.

1 South Coast AQMD, you know, nearly half the state's
2 population are getting about 20 percent of the funding. I'll
3 let you read the other ones there.

4 Yolo-Solano gets more money on a percentage basis
5 because UC Davis is there and they've won some large awards
6 from us over the past few years. And the other Nor Cal, So
7 Cal, those are the smaller air districts. You can see those.

8 And then about 23 percent of our funding is what we
9 call kind of state-level grants, so these could be for very
10 large EVSC electric vehicle supply equipment awards, E85
11 awards, things like that. And it's really difficult for us to
12 allocate those to the air district basins. So those kind of
13 roll up statewide levels.

14 What I'm going to do now is kind of walk you through
15 the four or five major technology areas in our program, so
16 we'll start with electric vehicle support, \$38.3 million to
17 date, about 9,300 charges that we've help fund throughout
18 California. You can see the breakout there, about 3,000. The
19 commercial -- or commercial destination part, about 5,000 to
20 your residences and those primary single-family homes. But
21 we're trying to do -- kind of crack the nut on multi-unit
22 dwellings. Less than 1,000 for workplace. And our DC fast
23 charger network is up over 100 now.

24 The Regional Readiness Grants, we now have 21 of
25 those for -- there's -- there's a typo there, it should be

1 \$4.5 million, excuse me. And those are a really good return
2 on investment. And I think Todd kind of, you know, talked
3 about that a little bit this morning in his presentation.
4 What we don't want to be is the Sacramento bureaucrats in the
5 room, you know, in the conference room deciding how money
6 should be spent in every locale, every region in California.
7 Our state is too big, too diverse, too complex for that. So
8 we think local government really has a lot to offer here, and
9 we're getting a good return on that.

10 CDRP support. So over the years we have made
11 payments to the Air Resources Board to supplement their
12 funding for the Clean Vehicle Rebate Voucher, so almost \$50
13 million and 21,000 vouchers.

14 This chart shows all sales through December 2014.
15 So we think we're at about 120,000 vehicle mark in California.
16 That's 40 percent of total sales in the United States. Again,
17 we are -- it's not just that we're a leader for the other
18 states and the United States, it's that we're toe to toe with
19 some of the major industrial economies in Europe and Asia in
20 terms of our investments in alternative fuel and zero-emission
21 infrastructure and vehicles.

22 This map shows the rapidly developing fast charger
23 network in California. So you can see the -- the ones that we
24 funded, we've got the Tesla superchargers on there. The NRG
25 EV Go, so that's the -- NRG is the -- has the settlement

1 agreement with the California Public Utilities Commission for
2 charger deployment in California. So they're obligated to do
3 200 fast chargers and 10,000 what we call make-ready stubs.
4 So that's the doing the conduit installation and pouring the
5 pad so another vendor can come in and put a charger on that,
6 and that's developing nicely.

7 I tried to kind of pull out and highlight some of
8 our investments in the San Joaquin Valley for the different
9 fuel categories I'm going to go through. So this is not a
10 full list but it's some of the more interesting ones. So we
11 have a network of eight DC fast chargers at hotels up and down
12 the freeways here in the valley, two out here in the parking
13 lot for the APCD, Fresno State. Fresno has got some municipal
14 multi-unit dwelling chargers. Caltrans. And then Clipper
15 Creek Reconnect, that was an early grant from us to upgrade
16 the old paddle style chargers to the current modern standards.

17 I'm going to turn now to hydrogen station funding.
18 This is also a very important part of our program. So we've
19 done over \$90 million to date through our program.
20 Specifically we've done 48 awards, so 45 of those will be for
21 new stations, 3 for station upgrades, and then what we call
22 Operation and Maintenance Grants. We currently have 11
23 operational stations in California. And we're estimating that
24 by the end of 2015 we hope to have 46 stations operational in
25 California. And then the balance of the ones that we're

1 funding should come online the first quarter 2016 and second
2 quarter 2016.

3 You can see some of our other investments. AC
4 Transit, a fuel-side bus station up there in Emeryville.

5 CDFA, California Department of Food and
6 Agricultural, Division of Weights and Measures, through
7 funding support they developed the first retail fueling
8 standard, so those include the regulation and the technical
9 protocols, to allow for retail sale of hydrogen fuels in
10 California. And again, that's the -- that's the first in the
11 country to allow for that.

12 So these next two maps are courtesy of the
13 California Fuel Cell Partnership. This shows operational, and
14 then stations in the planning and construction development
15 phase. So in Northern California we have two that are
16 operational, Emeryville, and then the new station in West
17 Sacramento. And Commissioner Scott and myself and many other
18 people here from the Sacramento teams were really, really
19 pleased to see that station come online. That was the first
20 of our stations funded back in 2010 to become operational, and
21 we look forward to more.

22 So this chart shows the -- the Bay Area network. So
23 you can see a lot of investments in the -- the Peninsula,
24 Silicon Valley there around Sunnyvale and San Jose. And we
25 hope to get more stations in the East Bay. The Sacramento

1 station is in your upper right.

2 Southern California, this is the predominant number
3 of stations that we're going to do. So you can see there are
4 nine operational now in Southern California. And the balance
5 there that you can see that are in development. And one of
6 these to note, so in the Valley in Coalinga we're going to
7 have what we call -- what do we call it -- a transition
8 station. I'm losing my word there. Anyway, the one -- the
9 one as you're going from one primary location to another that
10 you can fuel along the way, so that's going to be in Coalinga.
11 And that's a really important event for the valley to start
12 linking up the big metropolitan areas in the north and south
13 parts of the state.

14 These are the vehicles that either are available or
15 will be available soon. The Toyota Mirai, I think a lot of us
16 have been able to ride and drive that. It's a fabulous
17 automobile. The Hyundai Tucson is now available, \$499 lease
18 per month. That includes your fuel. You know, you do the
19 math. That knocks my fuel down a lot. So I'm kind of
20 thinking about that, and I've still got kids. And the Honda
21 concept vehicle, and we hope to see that out 2016-17 time
22 period.

23 I'm going to turn now to our truck funding. And
24 again, you kind of go back to those stats that I shared with
25 you initially, just that ratio of the number of trucks with

1 the very high volumes of fuel, carbon emissions, and criteria
2 emissions and particulates, so we put a lot money into it.

3 Trucks about a third of our total funding, \$156 million.

4 Commercial natural gas trucks, we are really the only source
5 at the state level for vouchers to get commercial, you know,

6 modern commercial natural gas trucks out on the roads in

7 California, about 2,700. Our fueling infrastructure, we've

8 done 60 stations, and about 5 of those are dedicated to

9 renewable natural gas. Commercial propane trucks was an early
10 part of our program and we've since discontinued that.

11 Commercial ZEV trucks, so it's zero emission vehicle
12 trucks, primarily medium-duty all-electric drive trucks, and
13 I've got some pictures and I'll show it, the bulk of our money
14 here is in advanced technology demonstration. So this is
15 really the future for trucking. So that can include kind of
16 these interim strategies with low NOx, clean burning natural
17 gas engines, going up to electric drive, hydrogen fuel cell
18 electric drive, and all the hybrid configurations you can do
19 on that, including range extenders.

20 I'm going to walk you through a couple of project
21 examples, again from the valley. So Proterra Electric Bus,
22 they're running two busses in Stockton with the Regional
23 Transit. So a \$2.5 million grant from us. They have a very
24 interesting fast charge capacity. So on the bus of that bus,
25 you know, the coupler kind of pokes up. They drive under a

1 canopy, the charger comes down, and you can charge in five to
2 ten minutes. So that kind of corresponds with the break time
3 for the drivers.

4 Motive Power Systems, they're a Silicon Valley firm.
5 The kid -- I mean, I'm sorry -- I'm sorry, Jim, the young man
6 is barely 30 years old and he's a classic Silicon Valley guy
7 out of Stanford. And my apologies, Jim. And he has made a
8 company, you know, pretty much from a couple of guys, you
9 know, in a spare bedroom to something that's now doing
10 electric dive vehicles. And they've got installation kits for
11 medium-duty trucks, for school busses. And they're even doing
12 Class A garbage trucks in Chicago now. It's just -- it's just
13 fabulous what this company has been able to do.

14 These busses here were funded through some of our
15 Technology Development Grants, through our Assembly Line
16 Manufacturing Grant that we gave to them. And this I a great
17 example of partnership. The Air Board then came in with Air
18 Technology Demonstration Grants and funded the glider, that's
19 what we call, you know, the chassis and the body without a
20 drive train, put that together. It's a really nice package,
21 electric school busses in the valley. I guess John Clements
22 (phonetic) is not here today, the electric school bus
23 evangelist, he calls himself. But that's him down in the
24 lower left driving the kids in that.

25 This project is a couple years old now but it's

1 still incredibly important in terms of scale. So Electric
2 Vehicles International in Stockton, they did the 100 Truck
3 Deployment Project which I believe is still the largest single
4 deployment of electric trucks in the United States. That was
5 Governor Brown at the -- the inaugural event there. So
6 this -- this electric truck works very well. It cycles in
7 front of our building. I don't know if it goes in front of
8 your building, Erik. But I just love hearing that whine
9 because you're not hearing the rumble-rumble, you're not
10 smelling the exhaust, it's just that beautiful high-pitched
11 whine of the electric motor, so --

12 PRESIDING MEMBER SCOTT: We saw one on the way here.

13 COMMITTEE MEMBER MCKINNEY: So turning to natural
14 gas, I'm going to want to highlight some of our investments
15 here in the valley. So we've got four CNG stations, two are
16 at school districts and two are with local government. The
17 way our Natural Gas Truck Voucher Program is set up, we can't
18 quite get detailed geography information on where are
19 operating. But we did a search of DMV data and we got about
20 2,000 natural gas trucks in the valley and another 1,800
21 light-duty -- light-duty vehicles.

22 Turning now to biofuels which is another very
23 important part for the trucking sector, and also light-duty
24 vehicles, about \$131 million total. So biogas has received
25 \$50 million, ethanol \$23 million, cellulosic ethanol \$3.9

1 million, and biodiesel which has really made tremendous
2 strides over the last few years to become commercially viable
3 \$36 million, and then renewable diesel about \$17 million. On
4 the far right you can see the estimates of production
5 capacity. So we're thinking up to 145 million gallons per
6 year. That's not bad, but again we have a very, very large
7 fuels' market in California, so we have a long ways to go.
8 You can also see our investments in E85 fueling
9 infrastructure. And then biodiesel tank storage.

10 So I went through our -- our catalog or compendium
11 and pulled out some of the projects that we've done here in
12 the valley. So one thing to recognize about -- in terms of
13 thinking of different parts of our valley investments, this is
14 really where the action is in terms of jobs, economic
15 development, tax revenues, multipliers through employee, and
16 revenues. These are major industrial facilities. They've got
17 a core workforce. And you've got all these satellite
18 companies that are needed, not just to construct but also to
19 bring in feedstock, to take out final product, so it's a real
20 jobs creator

21 Crimson Renewable Fuels, Biodiesel Community Fuels,
22 Biodiesel in Stockton, Great Valley Sweet Sorghum Trials,
23 those are down in the Visalia and Bakersfield area. EdenIQ is
24 a leading developer of cellulosic process technologies;
25 they're also in Visalia. Pixley Biogas, I was at that grand

1 opening two days ago. Colony Energy in Tulare is a biogas
2 project. And then the three big corn ethanol biorefinery
3 companies here in California, Pacific Ethanol, and that is in
4 Calgrain, all won awards to start introducing grains sorghum
5 into their mix and start backing out the corn that's used to
6 fire those plants.

7 Some shots of the construction. The refinery
8 expansion at the Crimson Renewable Fuels Project run by Harry
9 Simpson, very low carbon product, so 14 grams. You can really
10 just think about that on a 100-point scale. So gasoline and
11 Midwest corn ethanol come in at about 100 grams. So this
12 means at 14 it's about 85 percent less than conventional
13 petroleum products or -- or Midwest corn ethanol. So that
14 is -- that is underway.

15 And you'll see again I spent a lot of time on the --
16 on the freeways here the last couple of days. So I was able
17 to go down to the Pixley event on Tuesday, really, really
18 gratifying. So a \$4.6 million grant from us back in 2010. So
19 what they're going to do here is that they've made a deal with
20 the Four J Farms Dairy to take waste manures and they run it
21 through a pipeline. The -- the kind of -- the white flat
22 surface that you see there in the foreground is the digester
23 pit, that's fully covered and they generate biogas from that.

24
25 So again, this is a very large capacity refinery, 58

1 million gallons per year. What they're going to do with the
2 biogas is back out natural gas at about 6 percent, and that's
3 going to push down their carbon intensity score to 67 grams
4 Co2 equivalent per megajoule, so that's one-third less than
5 Midwest corn ethanol, one-third less than gasoline. So this
6 is now the lowest carbon industrial producer at large scale in
7 California. So again, congratulations to that project team.
8 It was really, really exciting to see that come online.

9 Turning now to workforce, we have a total of about
10 \$20 million, I think a little bit more, invested in workforce
11 training. So that covers 13,000 people that we've helped
12 provide training funding for across 600 businesses throughout
13 California.

14 I'm going to talk very briefly about what we get in
15 terms of carbon reduction and criteria reduction benefits from
16 these cumulative investments. So we have a contract with the
17 Natural Renewable Energy Laboratory in Colorado. Dr. Marc
18 Melaina is the principal investigator. Let me walk very
19 briefly through these benefits.

20 What this slide shows is what we call expected
21 benefits. So we assume that everything we fund is built to
22 scale and then operates at its design capacity through 2020.
23 And you can see these -- what these colored bars mean on the
24 bottom are the fuels, so biofuels, fuel production. The bulk
25 of the benefit there comes from biodiesel and renewable

1 diesel, about 12 percent from biogas. The blue section is
2 fueling infrastructure. And you can see that the bulk of the
3 benefit here is from natural and renewable gas. And what's
4 interesting to me there is if you think back to our
5 investments, this is only \$15 million investment across 60
6 stations. But because of the very high throughputs that you
7 can get with these hopefully the truck fleets will expand and
8 we can get that. So we get a large contribution from natural
9 gas renewable gas.

10 The top part is vehicles. And I think the surprise
11 to us, it was our Manufacturing Grants that are projected to
12 really account for the bulk of our -- our investments and the
13 bulk of our carbon reduction goals, so you can see that one
14 there. Light-duty vehicles are still -- you know, we're --
15 120,000 vehicles is great. A million is a lot more than that.
16 And the percentage of a \$27 million passenger vehicle fleet,
17 you know, we have -- we have a steep hill to climb. So I told
18 you about carbon reduction, about 2, 2.25 million metric tons.

19 We also have something we call market transformation
20 benefits. What this means is that for all these demonstration
21 projects that we fund, and that's really a big part of our
22 funding, hopefully they'll be successful, most of them are.
23 And then at some point, you know, in the future other
24 investors will come in, develop companies, pick up their
25 technology, and build replicate copies of that technology,

1 that plant, that vehicle. So we call this market
2 transformation. We can claim a little bit of credit for it.
3 And that really pushes the numbers up in an interesting way.
4 So after -- after 2030 we're estimating, you know, about 3.2
5 million metric tons up to about, you know, 5.25 million metric
6 tons. So is that a big number or a small number?

7 So we -- the Air Resources Board quantified the
8 carbon reductions needed to meet the ten percent reduction to
9 the low carbon fuel standard. That number is 15 million
10 metric tons. So that gives you a sense of, you know, the
11 relative contributions that we're getting from this funding
12 program over its lifetime.

13 I'm almost done here. I'm going to talk now just
14 briefly on the recent solicitations and awards since our last
15 Advisory Committee meeting in November.

16 So the Regional Readiness Planning Grant, so eight
17 additional awards for \$2 million has gone to the San Joaquin
18 Valley APCD, ZEV planning and implementation, and then our
19 first hydrogen planning award. We added one more awardee for
20 commercial-scale biofuels. This was the Verdes (phonetic)
21 Biofuels Project in Oakland, that's a \$3.4 million grant.
22 Manufacturing, we are continuing to evaluate the project
23 proposals that came in on this, and it's a \$10 million
24 solicitation, up to \$3 million in awards. Our early scale
25 biofuel production, \$3 million grant program. We're doing

1 this in two segments now. So we did a request for information
2 or an abstract, and then we're going to single out some of
3 those and ask them to submit full proposals. That will be
4 happening in April.

5 The San Joaquin Valley Center, I'm going to talk
6 about this a little bit. So a few years ago we had a grant to
7 develop regional centers throughout California. And the idea
8 of those is to have a center of excellence where you can
9 disseminate information on alternative fuels and vehicles and
10 funding technologies, and also have demonstration projects
11 there, so maybe some small fueling infrastructure, maybe a
12 small vehicle fleet that comes in and out, and also run an
13 educational program and seminars.

14 So we had two good awards in Northern and Central
15 California. We're still waiting for what we thought was a
16 high quality proposal from San Joaquin. And I was talking to
17 Samir Sheik this morning before the meeting and we think
18 there's really strong candidates that will put together some
19 good proposals here. So we're really looking forward to
20 getting that center funded and up and running.

21 ZEV Readiness planning, we continue to get a lot of
22 interest in this from regions throughout California. So we
23 have another \$1.3 million available for that. And then one of
24 our larger solicitations, a medium- and heavy-duty vehicle
25 demonstration projects. So we are coordinating closely with

1 our colleagues at ARB and under -- this is Erik White's
2 program, to make sure that we complement each other. So we're
3 going to really tackle the early demonstration phases and a
4 work on a pure technology development, you know, maybe one,
5 three, five vehicles. And then Erik and Andy Panson with the
6 work they're doing with the Greenhouse Gas Reductions funds,
7 they're kind of going after much larger fleet trials and
8 demonstrations throughout California, also with an emphasis on
9 disadvantaged communities.

10 In terms of natural gas, one of the things we're
11 doing here is starting to recognize the optional low-NOx
12 standard that the ARB has promulgated. So that will kind of
13 ratchet down pretty quickly from .2 grams NOx per brake
14 horsepower down to .1, and then down to .02 which is an 80
15 percent reduction.

16 Some of the ones coming up, so EV charging stations,
17 we've got that coming up. Natural gas fueling infrastructure;
18 and we're really starting to shift our focus to school
19 districts and municipal fleets on that. We think private
20 market can take care of the trucking fleets. Natural gas
21 vehicles, we're developing a contract with University of
22 California Irvine to take over that part of our program, to
23 run the voucher part of that.

24 And a new one that was specified in the AB 8
25 legislation is what we call intelligent transportation

1 systems. So this is a congestion relief and dispatch series
2 of computer programs. So we want to get started on that, and
3 then also with our federal matching funds.

4 And then finally, just a couple of other highlights.

5 So again, under the policy leadership of Commissioner Scott,
6 last year we did our first ever Integrated Energy Policy
7 Report focused almost exclusively on the transportation
8 sector. So that was -- the revised draft was posted in late
9 January. And this will be heard at our February 25 business
10 meeting. And the comment period just closed yesterday. And
11 we expect to have a good discussion at the business meeting.

12 And then lastly, our -- what we call our, you know,
13 section 3103 of Funding regulations, we're going to revise
14 those to potentially remove what we call the credit discount
15 provision under Part B of that regulation. So my colleague
16 Tim Olson has been designated lead on that. So Tim is doing
17 great work with his team to get that package ready for the
18 commissioners consideration.

19 So that concludes my part of the program. And --
20 yes?

21 MR. ORENBERG: (Off mike.) (Inaudible) ask you to
22 clarify that (inaudible) being March 2nd (inaudible) .

23 COMMITTEE MEMBER MCKINNEY: Okay. So Leslie
24 Baroody, our EV team leader, has asked me to say that EV
25 Readiness proposals are due -- would be due March 2nd. Great.

1 Thank you, Jacob.

2 MR. ORENBERG: (Inaudible) accepted right now,
3 whereas the previous instruction was (inaudible).

4 COMMITTEE MEMBER MCKINNEY: Uh-huh. Yeah. Okay.
5 So those -- those can be put forth right now.

6 Charles, shall we do clarifying questions now or
7 after your presentation?

8 Commissioner, what's your pleasure?

9 PRESIDING MEMBER SCOTT: Why don't you take
10 questions now?

11 COMMITTEE MEMBER MCKINNEY: Okay. I can take
12 clarifying questions now, first from the Committee, then
13 members of the audience.

14 Any clarifying questions from Committee Members
15 present? Clarifying questions from Committee Members on the
16 phone?

17 COMMITTEE MEMBER CLIFF: This is Steve Cliff. Can
18 you hear me?

19 PRESIDING MEMBER SCOTT: Yeah.

20 COMMITTEE MEMBER MCKINNEY: Yeah, Mr. Cliff. Can
21 you identify yourself?

22 COMMITTEE MEMBER CLIFF: Yeah. Steve Cliff from
23 Caltrans.

24 COMMITTEE MEMBER MCKINNEY: Uh-huh.

25 COMMITTEE MEMBER CLIFF: Very nice presentation.

1 Thank you. I just wanted to point out early on in the
2 presentation you had transportation I think at 36 percent of
3 the GHG emissions.

4 COMMITTEE MEMBER MCKINNEY: Uh-huh.

5 COMMITTEE MEMBER CLIFF: I think that doesn't really
6 account for the upstream. And so I just wanted to maybe urge
7 for consideration going forward that, you know, the upstream
8 component can be very significant as well. And it's probably
9 work pointing out that refining the fuels and extraction is
10 also a big chunk of the emission.

11 COMMITTEE MEMBER MCKINNEY: Great. Thank you for
12 that comment. Yeah. No, this focuses on on-road emission, so
13 you're -- you're correct in that.

14 Okay, Will -- Will Coleman, go ahead.

15 COMMITTEE MEMBER COLEMAN: Yeah. Can you hear me?

16 COMMITTEE MEMBER MCKINNEY: We can.

17 COMMITTEE MEMBER COLEMAN: So I just have a few
18 clarifying questions. One is around density of
19 infrastructure. So if you could go back to that map --

20 COMMITTEE MEMBER MCKINNEY: Hydrogen or electricity?

21 COMMITTEE MEMBER COLEMAN: Well, first let's just
22 look at EVs. And maybe it's true -- it's a similar question
23 for hydrogen which is do you have -- how are you guys thinking
24 about density (inaudible)? Do you have a heat map that could
25 be shared around what your goals are for density and distance

1 and where we're meeting those and where we are not?

2 COMMITTEE MEMBER MCKINNEY: Yes. So in terms of --
3 let's talk first about electric vehicle charging
4 infrastructure. The regional readiness plans that have been
5 developed by the -- the major metropolitan regions in the
6 state have that type of information. This is really for
7 illustrative purposes. And this just shows our fast charger
8 network in the state. And we -- we can view more regionally
9 based density maps on this. They get quite busy because of
10 the density of chargers in some areas. But I think that's a
11 good -- a good comment that you're making, Will.

12 For hydrogen we have used that mapping tool from
13 University of California Irvine who has been our kind of
14 mapping and technology support team for that. And we do have
15 those heat maps. And of course, the California Fuel Cell
16 Partnership has also done a lot of work on density for
17 hydrogen fueling stations.

18 COMMITTEE MEMBER COLEMAN: Yeah. I'll follow up
19 with you on it. I'd love to see some of those. It would be
20 really interesting.

21 On the hydrogen front do we have utilization rates
22 yet in terms of the infrastructure that --

23 COMMITTEE MEMBER MCKINNEY: I'm sorry. Can you
24 repeat your question please?

25 COMMITTEE MEMBER COLEMAN: For the hydrogen

1 infrastructure, do we have any utilization rate yet for the
2 infrastructure that it has been before, or do we have a
3 comparison of utilization rights that cross different
4 structure types?

5 COMMITTEE MEMBER MCKINNEY: This is very, very early
6 commercialization for hydrogen fuel cell vehicles. So we've
7 got, you know, basically a research fleet of about 200, 200-
8 plus vehicles. And again, our colleagues at the Air Board,
9 through their new authorities with AB 8, do what they call the
10 AB 8 Report. The one that came out last June is really
11 informative, so you can get that information in there. And
12 they do those kind of throughput projections on a per station
13 basis and a regional basis over time. So -- and they also
14 have the vehicle deployment figures in there. So I think,
15 correct me if I'm wrong, Erik, I want to say about 600
16 vehicles in the early years, growing rapidly to about 18,000,
17 maybe 6,000 earlier, going to 18,000 over -- over the 2020
18 timeframe.

19 COMMITTEE MEMBER WHITE: That's a good question. I
20 don't --

21 COMMITTEE MEMBER COLEMAN: Yeah. That is my next
22 question. Because I think there were -- there were vehicle
23 deployment targets associated with the deployment of
24 infrastructure on the hydrogen side. How are we doing in
25 terms of those vehicle deployment targets? Are we in line and

1 are we going to -- are we going to meet those targets?

2 COMMITTEE MEMBER WHITE: This is Erik White. You
3 know, I have to follow up. That's not the area that I focus
4 most of time working on back at ARB. But we could certainly
5 follow up and report back on how we're doing on those.

6 COMMITTEE MEMBER MCKINNEY: Yeah. Or, Charles, if
7 you have that. I know -- I know it's in our documentation. I
8 don't have it off the top of my head.

9 COMMITTEE MEMBER SMITH: Yeah. So I don't have the
10 number either. I was just actually going to point to the
11 joint report that ARB will be working on towards the end of
12 this year requires us to sort of evaluate the progress toward
13 our hydrogen station goals and hydrogen vehicle anticipated
14 goals. So that will -- that will be something that we do
15 discuss. But I don't have the number with me, unfortunately.

16 COMMITTEE MEMBER MCKINNEY: And, Will, if I could
17 say, as well, going back to EVSC, we did a major workshop
18 about ten days ago that Leslie Baroody headed up. And I think
19 a lot of the information that goes to some of your questions
20 was discussed at that workshop.

21 COMMITTEE MEMBER COLEMAN: Okay. Great. I'll
22 follow up. I'd love to get a link to that.

23 COMMITTEE MEMBER MCKINNEY: You bet.

24 COMMITTEE MEMBER COLEMAN: And then the other
25 question I had was just around -- actually two more questions.

1 One is how that hydrogen -- what the -- what that
2 infrastructure technology is and what the profile is of the
3 hydrogen, the greenhouse gas profile is of the hydrogen that
4 is actually being generated or distributed. Do we have that
5 information? Is that -- because I know there was a pretty
6 broad difference in terms of the greenhouse gas profile in
7 hydrogen depending on the fuel source.

8 COMMITTEE MEMBER MCKINNEY: Right. So under state
9 law, SB 1505, all fuel sold through hydrogen stations that
10 have public funding, that one-third of that fuel has to be
11 renewable hydrogen. So when we do the -- the calculations we
12 estimate that with that assumption that the carbon footprint
13 for hydrogen currently produced in California is comparable to
14 electric vehicles, so about 30 grams Co2 equivalent per
15 megajoule or, you know, two-thirds reduction below the
16 petroleum baseline. So that's kind the standard. That comes
17 from a mix of central station facilities such as Air Products
18 and Linde (phonetic) operate where you inject biogas and you
19 get a renewable product. And we are also starting to fund
20 very early generation onsite electrolyzers which is 100
21 percent renewable hydrogen. I think eight -- excuse me -- 5
22 to 8 percent of our -- 6 to 8 of our current stations are 100
23 percent renewable hydrogen.

24 COMMITTEE MEMBER COLEMAN: Interesting. And then
25 just a clarifying question. You had an expected benefits page

1 that showed the breakdown for each infrastructure, vehicles,
2 etcetera. The charts, the pie charts on the right, are those
3 expected benefits based on current investment? Is that based
4 on forecasted utilization? What do those actually represent?

5 COMMITTEE MEMBER MCKINNEY: Again, this is a best
6 case scenario, everything that we fund is built to design
7 parameters, it's operated at maximum throughput or usage
8 rates. So this is the high case scenario, that's correct.

9 COMMITTEE MEMBER COLEMAN: Okay. Thank you.

10 COMMITTEE MEMBER MCKINNEY: I'd like to recognize
11 Eileen Tutt, a Committee Member. Eileen? Committee Member on
12 the phone with Cal ETC. Okay, we can catch Eileen's comment
13 or question later -- later in the workshop.

14 Anything else, Jacob?

15 MR. ORENBURG: (Off mike.)

16 COMMITTEE MEMBER MCKINNEY: Can you speak into the
17 microphone please and identify yourself for the Court
18 Reporter?

19 COMMITTEE MEMBER HOLMES-GEN: Bonnie Holmes-Gen,
20 American Lung Association of California. Sorry, we knew there
21 was some delay in the train but I didn't realize it was quite
22 as extensive a delay.

23 COMMITTEE MEMBER MCKINNEY: Well, good for you for
24 taking public transportation down -- down to Fresno.

25 COMMITTEE MEMBER HOLMES-GEN: So in that little

1 triangle with the red in it and exclamation mark, it really
2 does mean something on the website.

3 Anyway, I just had a couple of questions. I tried
4 to listen in for most of this, wondering in terms of just he
5 overview of the goals if you're going to be including the
6 Governor's newly announced goals about 50 percent reduction in
7 petroleum? I just don't see that necessarily reflected yet.
8 I know it's relatively new, but I was wondering how that would
9 be reflected in the report.

10 COMMITTEE MEMBER MCKINNEY: Yeah. So I referenced
11 that verbally in the summary of the policy drivers that
12 influence our program.

13 And I don't know, Commissioner Scott, if you'd like
14 to speak further to that?

15 PRESIDING MEMBER SCOTT: I think we -- it's not in
16 the draft that you have because that came out before he made
17 those announcements. But in the -- in the next draft you'll
18 see some references to it. A good example of how those might
19 look, if you check out the Integrated Energy Policy Report, we
20 put in a few highlights in there about the Governor's speech.
21 And so we will -- we will do that.

22 We wanted to be a little bit careful because it's
23 the state of the state speech and there's -- there's a lot
24 that goes between. But it just -- it helps stress that we
25 have some goals that we are working towards between now and

1 the 2050 goals. And so we'll -- we'll have appropriate
2 updates throughout the text in the next version.

3 COMMITTEE MEMBER HOLMES-GEN: Okay. And I wanted to
4 ask a question but I'm afraid that maybe it was already asked
5 as I was walking in. But you were talking about some of the
6 EV infrastructure. You know, there's been a lot going on
7 between the Air Board and the Energy Commission looking at
8 this. And I was wondering if there's -- are there some
9 specific milestones that have come out that that are now being
10 incorporated into our 118 funding recommendations in terms of
11 the numbers of stations, the placement of stations, what we're
12 trying to aim for and how that's meshing with these
13 investments?

14 COMMITTEE MEMBER MCKINNEY: Yeah. So Charles will
15 speak about this more in his part of the presentation.

16 COMMITTEE MEMBER HOLMES-GEN: Okay. Okay.

17 COMMITTEE MEMBER MCKINNEY: But generally we
18 continue to -- to focus on areas that are, you know, say
19 relatively underserved solely by private markets and private
20 investment, so municipal -- multi-unit dwellings, excuse me,
21 multi-unit dwellings. So I think 40 percent of the state's
22 population does not live in single-family residences and live
23 in, you know, apartment blocks or condominiums. So that's a
24 critically important part of the driving public, so that's a
25 big focus.

1 The DC fast charger network, workplace charging,
2 we've had a lot of testimony through our IEPR proceedings that
3 Commissioner Scott led. And then also with our workshops
4 there's a very strong return on investment, and you can
5 actually see these kind of blips or pulses in increased
6 (inaudible) sales in areas served by those employers, so
7 that's of interest to us. And then again, destination
8 chargers, that is large, and we just continue to invest in
9 that. And again, Charles is going to talk about some of the
10 recent developments at the Public Utilities Commission and the
11 industrial utilities in California, it's a lot -- a lot of
12 action. It's very dynamic right now in terms of all the
13 different pots of money, stakeholders and different actors
14 coming into this part of the electric vehicle support market.

15 COMMITTEE MEMBER HOLMES-GEN: Okay. It would just
16 be helpful to get a sense of how does -- what we're expecting
17 matches up to the need that's been projected in these studies.

18 COMMITTEE MEMBER MCKINNEY: Yeah.

19 PRESIDING MEMBER SCOTT: Also that we are -- we
20 are -- part of the workshop that we did about two weeks ago is
21 to get smarter quick about all of the moving pieces that are
22 out there. As you know, the playing field, and Charles will
23 mention this, but the PUC decision is moving very fast. And
24 so we -- we're working hard to be nimble and flexible so that
25 we are continuing to target the money at places that expand

1 the network. So we're not recreating the wheel. We're not
2 putting money in a place where the IOU is getting ready to go.
3 So we're working pretty hard to try to be nimble there. But
4 as you know, a lot of that is still kind of getting fleshed
5 out a little bit, but I just wanted to add that.

6 COMMITTEE MEMBER HOLMES-GEN: That's great. One
7 more quick -- just one more quick --

8 COMMITTEE MEMBER MCKINNEY: Certainly, Bonnie.

9 COMMITTEE MEMBER HOLMES-GEN: -- comment which is
10 that I really appreciate you including the geographic
11 distribution of funding. I just took a look at that this
12 morning, so it will be helpful to look and digest that. And
13 the focus that you've expressed on making sure that there are
14 projects and investments in under-served communities, and I
15 really appreciate that discussion as being a focus here. And
16 glad to hear that the -- the project of a center of excellence
17 in the San Joaquin Valley, it sounds like that's moving
18 forward.

19 COMMITTEE MEMBER MCKINNEY: Yes.

20 COMMITTEE MEMBER HOLMES-GEN: And so I'm really glad
21 to hear that. And just wanted to comment that I would really
22 love to have more discussion or hear more at some point, it
23 doesn't have to be right this second, about how the Energy
24 Commission and the ARB can help encourage more projects in
25 this region and what is needed in terms of technical

1 assistance or other tools that can be used to help increase
2 the number of applications and the quality of applications so
3 that we can get more funded projects here. It's great that we
4 have the -- the 14 percent of the funding. But I think
5 clearly everyone knows that we need to have more.

6 COMMITTEE MEMBER MCKINNEY: Yeah. I think there's a
7 shared policy goal. Yeah. And also before I -- I just wanted
8 to make sure that Bonnie, Tim, and -- and I'm sorry, I
9 haven't --

10 COMMITTEE MEMBER ALAFIA: I'm Joy.

11 COMMITTEE MEMBER MCKINNEY: -- yeah, introduce
12 yourselves as Advisory Committee Members.

13 COMMITTEE MEMBER ALAFIA: Hi. Joy Alafia with the
14 Western Propane Gas Association. Thanks for having me.

15 COMMITTEE MEMBER CARMICHAEL: Good morning. Tim
16 Carmichael with the California Natural Gas Vehicle Coalition.

17 COMMITTEE MEMBER HOLMES-GEN: And Bonnie Holmes-Gen
18 with the American Lund Association in California.

19 PRESIDING MEMBER SCOTT: Could you check to see if
20 there's any on the phone?

21 COMMITTEE MEMBER MCKINNEY: Yeah. Okay. Are there
22 additional Advisory Committee Members who have joined us by
23 phone?

24 COMMITTEE MEMBER TUTT: Hi, Jim. Can you hear me
25 now?

1 COMMITTEE MEMBER MCKINNEY: Yes. Is this Eileen?

2 COMMITTEE MEMBER TUTT: Yes.

3 COMMITTEE MEMBER MCKINNEY: HI, Eileen.

4 COMMITTEE MEMBER TUTT: Hi. Yes. Eileen Tutt with
5 the California Electric Transportation Coalition. And if you
6 don't mind entertaining a question, I do have one after my
7 other colleagues have been introduced.

8 COMMITTEE MEMBER MCKINNEY: Okay. Anybody else on
9 the phone, Jacob?

10 COMMITTEE MEMBER SHEARS: Yeah. John Shears. I've
11 actually been on since I think it was Tom Jordon [sic] who was
12 giving the Air Districts presentation.

13 COMMITTEE MEMBER MCKINNEY: You should announce
14 yourself, Mr. Shears. Okay.

15 Anybody else, Jacob. Great. Okay.

16 I'd like to recognize Tim Carmichael. Do you have a
17 clarifying question?

18 COMMITTEE MEMBER CARMICHAEL: I do, thanks. I was
19 in transition so I missed your conversation about potential
20 near term solicitations. And I'm -- I apologize if you've
21 already covered this, but if you could just give me the quick
22 version of why are you listing UC Irvine as a potential
23 administrator as opposed to the administrator? Because I
24 thought that was definitely going to happen. Could you just
25 clarify that?

1 COMMITTEE MEMBER SMITH: Yeah. This is Charles
2 Smith. That -- that is -- that agreement has been executed at
3 the business meeting. So it's no longer potential, it is
4 expected.

5 COMMITTEE MEMBER CARMICHAEL: Thank you very much
6 for that.

7 COMMITTEE MEMBER MCKINNEY: Right. Good catch, Tim.

8 COMMITTEE MEMBER CARMICHAEL: And then my other
9 quick comment is as the staff knows pretty well some of my
10 member companies have engaged on this 3103 issue for a few
11 years. And very, very happy to see that the CEC is working on
12 this and it's going to -- there's going to be discussion at
13 the business meeting in a couple weeks. So thank you for
14 that.

15 COMMITTEE MEMBER MCKINNEY: All right. I'd like to
16 turn to Eileen Tutt.

17 COMMITTEE MEMBER TUTT: Thank you, Jim. I had -- I
18 really appreciated -- in follow-up to Bonnie in a sense, I
19 really appreciated the breakdown by -- by location, Jim. I
20 thought that was very well done and really needed. But I had
21 a question for Todd. And I -- my technical inability limited
22 me from trying to get that question in when he was actually
23 speaking. I don't know if I can ask the question still.

24 COMMITTEE MEMBER MCKINNEY: Yeah. He's approaching
25 the microphone here, so --

1 COMMITTEE MEMBER TUTT: Okay. So my question --

2 COMMITTEE MEMBER MCKINNEY: Go -- yeah.

3 COMMITTEE MEMBER TUTT: -- Todd, is as Bonnie sort
4 of indicated, there's a lot of concern, I think, among the
5 policy makers and -- and stakeholder community about the level
6 of funding that goes to the valley, given that the valley has
7 been identified as pretty much entirely made up of the red
8 dots on the -- on the CalEnviroScreen, disadvantaged
9 communities, although I have to say I don't like that term
10 very much, but in any case that's the term of art right now.
11 And your presentation indicated that quite a bit of funding,
12 and certainly the CEC has been very proactive in making sure
13 that the valley is getting its fair share. And given that the
14 number of impacted communities in the valley is so high I'm
15 very happy to see that your percent total is above your
16 percent of state population. Because your percent total of --
17 of impacted communities is also significantly higher.

18 But I guess my question to you is, you know, right
19 now we have the Energy Commission money, and it really does
20 look like you are satisfied with the way the money has been
21 allocated and you're able to implement a lot of very important
22 programs as a result of the Energy Commission's grant process.
23 But there's also this new money coming in as a part of the
24 expansion of the Air Quality Investment Plan Program under the
25 Air Resources Board. And I'm wondering, are you, you know,

1 are you aware of that? Are you accessing that? As you may or
2 may not know, certainly Bonnie is involved and I'm involved,
3 there's a pretty significant shortfall, we think, in the '15-
4 16 budget for funding for the kinds of programs that you're
5 implementing in the San Joaquin Valley. And we do want to
6 ensure that there's more money invested in that area and in
7 those programs.

8 So I'm just wondering how connected you are to the
9 Air Quality Investment Plan? And are you -- you know, is
10 there anything we can do or that you see that the state can do
11 or the Energy Commission or that this Advisory Committee can
12 do to help ensure that the programs that you're trying to
13 implement are successful and perhaps make sure that the
14 funding continues?

15 MR. DEYOUNG: That's a great comment. And while we
16 certainly -- we are absolutely very appreciative of, you know,
17 the funding level that's been directed at the valley so far,
18 you know, we definitely always think that there's room for,
19 you know, for improvement in that area and for, you know,
20 going for an additional -- an additional slice of the pie, as
21 it were.

22 It's -- talking to your question specifically, we
23 are definitely engaged in the ARB side of AQIP. And you know,
24 we're sitting on all of the various working groups. We've
25 been working very closely with ARB staff and management on

1 ensuring that, you know, a lot of these programs that are
2 targeted at disadvantaged communities, you know, that we're
3 actively engaged in how those -- how those programs are being
4 developed, you know, the -- the specifics on how they're
5 implemented to ensure that -- that the valley can take
6 advantage of those funding opportunities. You know, we've
7 been working very closely at all levels in each one of these
8 programs. And we're definitely keeping a very close eye on
9 the funding opportunities as they present themselves. You
10 know, we're being active in making sure that those -- those
11 programs are developed in a way that -- that they definitely
12 benefit the valley or have the potential to benefit the
13 valley, or specifically don't exclude, you know, by some
14 reason don't exclude the valley in their funding.

15 So it's -- it's definitely something that we are
16 engaged in and -- and we are being very active, particularly
17 with this upcoming funding cycle and all of the -- the new
18 programs that are being developed on the AQIP side.

19 COMMITTEE MEMBER TUTT: Okay. Thanks. That -- that
20 really helped, Paul [sic]. And I'm going to reach out to you
21 off the line just to talk to you about some of the upcoming
22 funding beyond '14-15 and '15-16. I think we're facing a
23 pretty substantial shortfall in the need, particularly in the
24 valley, I would say.

25 MR. DEYOUNG: That would be wonderful. I look

1 forward to it.

2 COMMITTEE MEMBER TUTT: Thank you. And thank you
3 for the links, Jim.

4 COMMITTEE MEMBER MCKINNEY: Did we have any more
5 clarifying questions? Was that from the audience, Charles?

6 COMMITTEE MEMBER SMITH: WebEx.

7 COMMITTEE MEMBER MCKINNEY: WebEx. Okay. Can you
8 open that up, Jacob?

9 COMMITTEE MEMBER SMITH: So we -- we had a comment
10 come in from Dr. Thomas Green.

11 So, Jacob, can you selectively unmute? Is that
12 possible.

13 Go ahead, sir.

14 COMMITTEE MEMBER MCKINNEY: Dr. Thomas Green? Okay.
15 Maybe we'll come back later in the -- in the workshop program.

16 Let's see. Okay.

17 Oh, go ahead, Commissioner.

18 PRESIDING MEMBER SCOTT: Well, I was just going to
19 say, thank you for your presentation.

20 COMMITTEE MEMBER MCKINNEY: Yeah. I neglected in
21 my -- my staff introductions to recognize Shawn Pittard from
22 the Public Advisor's Office at the California Energy
23 Commission. So his job is to facilitate communication between
24 members of the public and stakeholders and Commission staff
25 and the Commissioners. So -- okay.

1 PRESIDING MEMBER SCOTT: All right.

2 COMMITTEE MEMBER MCKINNEY: Thank you.

3 PRESIDING MEMBER SCOTT: Yeah. Thank you very much,
4 Jim, for your informative presentation. And on the Public
5 Advisor, if you want to make a comment we have these blue
6 cards here. He has them in his hand right up front. And you
7 can just fill out it, please, and then he'll give it to
8 Charles. And we'll make sure that you have an opportunity to
9 be heard.

10 And for folks who came in from I guess the right-
11 hand side instead of the left-hand side, there are copies of
12 all of the presentations, except the first one, out front so
13 that you can -- if you'd like to pick those up then you don't
14 have to take as many quick notes there. They're just right
15 out front for you all.

16 So thank you, Jim, for your excellent presentation.

17 Let's turn it over to Charles.

18 COMMITTEE MEMBER SMITH: Thank you, Commissioner.

19 Good morning everybody. Let's see, oh, I need to
20 load up my algorithm. Could you sit where I was, Jim, and --

21 COMMITTEE MEMBER MCKINNEY: Okay.

22 COMMITTEE MEMBER SMITH: We're going to shuffle
23 seats a little bit here. So, Jim, if you could just hit
24 escape and go down to PowerPoint and select the -- the
25 Investment Plan presentation. There you go. And -- perfect.

1 Thank you. Okay.

2 Again, I'm Charles Smith. I'm the Project Manager
3 for the 2015-2016 Investment Plan Update. Jim already
4 mentioned a little bit about the Investment Plan Update, so
5 I'll go quickly here.

6 This is an annually updated document. Each one
7 determines our funding allocations for the coming fiscal year,
8 so this would be for Fiscal Year 2015-2016 beginning on July
9 1st. We routinely write investment plans for a \$100 million
10 projected funding allocation. That, of course, can be
11 affected or adjusted by the state budget. But we're still
12 anticipating \$100 million for the coming fiscal year. I want
13 to specify that these funding allocations go toward broader
14 categories of project types, not two specific projects. And
15 that the Investment Plan is developed with input from Advisory
16 Committee members and members of the public, whether in venues
17 such as these or through our public docket. And I'll have
18 that information about how to submit comments to our public
19 docket at the end of these slides.

20 Here's our schedule for the '15-16 Investment Plan's
21 development. You can see a few events that we've had in the
22 past. The initial Staff draft was released in early November,
23 and we followed that with our first Advisory Committee meeting
24 at the Energy Commission headquarters in mid-November. We
25 released our revised Staff draft or Staff report, I should

1 say, on January 9th, and are holding our second Advisory
2 Committee meeting based on that document today. In March we
3 anticipate release of the Lead Commissioner Report, and that
4 will be the version that we take to a Commission Business
5 Meeting for formal approval, and we're aiming for our April
6 Commission Business Meeting.

7 About the revised Staff report, so we had a
8 statutory deadline to distribute that document to the relevant
9 and -- to the relevant policy and budget committees of the
10 legislature ahead of January 10th, roughly when the Governor
11 submits his proposed budget, and so we accomplished that. The
12 revised Staff report provides updates to the context of the
13 '15-16 Investment Plan which I'll mention in a little bit. It
14 responds to and incorporates numerous stakeholder suggestions
15 and comments. I think we received about 70 or 80 individual
16 comments from about 20 different individuals and groups. And
17 then I also wanted to highlight that the -- this particular
18 revised Staff report does not propose any changes to the
19 initial allocations scope or funding levels that were part of
20 the first Staff draft that came out in November.

21 Regarding updates to the -- the context of the
22 Investment Plan's development, these are a few of the things
23 that I wanted to highlight, falling petroleum prices, the
24 ARB's preliminary look at their funding proposals for the Air
25 Quality Improvement Program, and the low carbon transportation

1 share of the Greenhouse Gas Reduction Fund, or AB 32 fund, and
2 then finally the CPUC rule making decision.

3 You can see here the -- the price of petroleum has
4 been coming down pretty significantly since about last fall
5 compared to last year. This year is in the blue dots there.
6 We know that the petroleum market is cyclical. It has ups and
7 downs. We've had a long up period for a while and now we --
8 we're in a downward period. We don't know how far down, how
9 long that will be, but we still maintain our long-term goals
10 for the state pertaining to greenhouse gas reduction, air
11 quality improvement. We also note that our -- some of our
12 alternative fuels such as electricity and natural gas still
13 commanded a decent fuel price edge or gasoline and diesel. I
14 think the price of electricity relative to gasoline might be
15 about half on a per-mile basis. And the price of the -- the
16 price differential between natural gas and diesel may have
17 gone down from a previous level of about maybe \$1.60 per DGE
18 or diesel gallon equivalent to maybe \$.60 advantage per DGE
19 now.

20 We've also, as I mentioned, had the opportunity to
21 see a preliminary version of the ARB's potential funding for
22 the low carbon transportation share of Greenhouse Gas
23 Reduction Funds and the Air Quality Improvement Fund, roughly
24 \$200 million and \$22 million respectively. As part of an
25 initial document and public workshop a week or two ago ARB

1 staff recommended similar funding as they approved for the
2 last -- or current fiscal year, I should say. They're holding
3 more focused workgroup meetings for specific project types
4 throughout this month and into the next. And they expect to
5 have a proposed funding plan for their board to review in May
6 of 2015.

7 And this table shows the -- the project types. As
8 mentioned, these are fairly similar to the previous fiscal
9 year's funding for the Clean Vehicle Rebate Project, that's a
10 light-duty electric vehicle and fuel cell vehicle incentive,
11 as well as pilot projects to benefit disadvantaged communities
12 in the light-duty vehicle sector. And then several heavy-duty
13 vehicle and equipment projects, including the hybrid -- Hybrid
14 and Zero Emission Vehicles, Truck and Bus Incentive Project, I
15 think I have that right, the Truck Loan Program for Clean
16 Diesel Vehicles, and New Low NOx Certified to Optional
17 Standards Project, and then the California Clean Truck, Bus
18 and Off-road Vehicle and Equipment Technology Program, that's
19 a combination of demonstration projects and pilot projects.
20 And you can see in the footnote there that at least 50 percent
21 of their low carbon transportation funds will be slated to
22 benefit disadvantaged communities, which may be of particular
23 interest to this air district.

24 I also wanted to touch on the CPUC rule making
25 decision that Jim and a few others have mentioned so far. So

1 the previous policy was that major investor-owned utilities
2 were prohibited from owning charging stations. And that
3 blanket policy has since been lifted in favor of a new policy
4 that allows the CPUC to approve utilities ownership on a case-
5 by-case basis.

6 Now since then we've seen the -- the big three
7 investor-owned utilities put forth some -- some proposals for
8 how many electric vehicle chargers they would be interested in
9 deploying. So over the next four to five years San Diego Gas
10 and Electric might be looking to deploy 5,500 stations. So
11 Cal Edison, 30,000 stations. PG&E, 25,000 stations. So
12 that's obviously a big development. Jim mentioned that our
13 program to date has funded about 9,500 charging stations. So
14 that gives you a sense of the scale involved here. And for
15 that obvious reason we're continuing to track CPUC proceedings
16 to make sure that we can do our best to compliment what's
17 anticipated, to keep the ball rolling as those plans are being
18 deployed.

19 I want to talk about a few of the specific changes
20 that we made within the revised Staff report version of the
21 '15-16 Investment Plan. So general changes throughout, we
22 added a summary of alternative funding and finance --
23 financing mechanisms that we have both used previously in our
24 program, as well as mechanisms that we could foresee using in
25 the future, as well. This was something that a lot of people

1 had been asking about, whether there might be mechanisms in
2 addition to sort of the standard solicitation and award
3 process that we have used in the past.

4 Throughout the document we've also updated summaries
5 of our previous awards just to stay current. And we have
6 updated NREL's estimates of our expected program benefits,
7 which you can see here Jim incorporated the chart on the right
8 into his own presentation. But you can kind of see the change
9 that occurred as we added more projects into the portfolio.
10 The expected benefits went up. The market transformation
11 benefits, both the high and low range, similarly increased.

12 Moving now into specific sections of the Investment
13 Plan, in the biofuel production and supply section we added
14 references to what is an illustrative scenario, not
15 necessarily the definitive expectation but an illustrative
16 scenario for what 2020 LCFS compliance might look like. And
17 this is kind of an interesting exercise because it gives you a
18 sense of the scale for -- for the amount of alternative fuel
19 that needs to get incorporated for the number of different
20 kinds of vehicles that need to be put on the road and so
21 forth.

22 We also clarified the eligibility of dimethyl ether
23 or DME as a potential biofuel for funding in this category.
24 We updated information with -- from the ARB's proposed
25 Alternative Diesel Fuel regulation. There's a lot of exciting

1 activity happening there. And finally, we expanded
2 information on biomethane feedstock availability, as well as
3 CalRecycle's recent grants that they've been providing with a
4 smaller share of Greenhouse Gas Reduction funding as well.

5 On the charging infrastructure section, again, we
6 updated that section to discuss expectations from the -- what
7 has developed with the CPUC's rule making. We haven't yet
8 been able to fully incorporate the utilities recently
9 announced plans, so that will be fed into the next version of
10 the lead commissioner report. We're also encouraging feedback
11 on how we can reach disadvantaged and under-served communities
12 with our charging infrastructure funding.

13 Bonnie had mentioned whether we had developed any
14 sort of milestones for charging infrastructure. We do have
15 sort of a broad general trajectory, I guess you could call it,
16 for what level of charging deployment is necessary to reach
17 the governor's 2020 goals for ZEV preparation. That's in
18 Table 14. But, of course, other players are also stepping in.
19 So we're -- we're not expected to be going it alone in that --
20 in that fight. Obviously, utilities are going to play a big
21 role. NRG will have a role to play as well.

22 In the hydrogen refueling stations where we've kept
23 a \$20 million allocation, we have been revising our cumulative
24 station count just to sort of stay consistent between the
25 ARB's expectations and -- and our own, just to make sure we're

1 all on the same page. We may have to revise that again as we
2 go into the Lead Commissioner Report. And then we've also
3 introduced a mention of the joint CEC-ARB report on Hydrogen
4 Refueling Network Progress which is due at the end of this
5 year.

6 For natural gas infrastructure, we haven't made any
7 changes to that section. But I might point out, as Jim
8 mentioned, we have a natural gas fueling infrastructure
9 solicitation. I don't think it's been released yet, but it
10 should be out sometime soon. There's obviously the potential
11 to backfill any over-subscription of -- of successful
12 applications in that solicitation with funding from this
13 proposed Investment Plan.

14 For natural gas vehicles, here again we're
15 reiterated the potential biomethane role in ARB's Illustrative
16 2020 SCFS Compliance Scenario. And we have updated, but we're
17 still awaiting more information, on methane leakage studies
18 that will help us get a better sense of how conventional
19 natural gas can contribute to our long-term GHG reduction
20 goals.

21 In the Medium- and Heavy-Duty Advanced Vehicle
22 Technology Demonstration and Scale-up category, we wanted to
23 make explicit that we are considering not just vehicle
24 propulsion technologies, but also non-propulsion technologies,
25 for example, intelligent transportation systems that might

1 make the truck system -- or trucking system more efficient,
2 even before the incorporation of alternative fuels.

3 We also wanted to clarify that this category is
4 expected to be open to projects that seek funds for
5 demonstration, scale-up and manufacturing, or both activities.
6 I think there was a little bit of confusion on that point at
7 the last Advisory Committee meeting. A lot of people were
8 concerned that you could only come in if you wanted to do
9 both, but that's not the case. You can do demonstration,
10 scale-up manufacturing, or both.

11 In the Regional Readiness section we updated the
12 results from our most recent solicitation. But also I wanted
13 to mention on this subject, as Jim mentioned, we modified and
14 rereleased our ZEV Regional Readiness solicitation. And we
15 suspect there may be more demand for successful -- more demand
16 for those funds from successful applications than our current
17 amount of funding and support.

18 Right now, based on the responses that we got to the
19 previous solicitation there's maybe the possibility of being
20 over-subscribed, perhaps upwards of \$3 million. So if -- if
21 that is the case, and we should know more by the end of this
22 month, well, moving into, I guess, March 2nd, was it, or March
23 5th we -- we might recommend putting additional funding into
24 this category. One possibility for that is to draw a small
25 share of the funds from charging infrastructure allocation,

1 for instance. We certainly see the value of this Regional
2 Readiness efforts that we have been funding. We have been
3 the, to our knowledge, the only entity in the state funding
4 that kind of work. And so it's something that we certainly
5 want to see proceed.

6 For the Emerging Opportunities category and the
7 Workforce Training and Development category we haven't
8 proposed any changes either to the funding allocations or to
9 the -- to the surrounding text.

10 So this table gives you the summary of our proposed
11 funding allocations as they stand in the revised Staff report.

12
13 Our next steps for the Investment Plan, again we're
14 continuing to seek your feedback, feedback from all
15 stakeholders. We ask for written comments a week from today,
16 if possible, February 19th. You can send them to our docket
17 office. Just send it docket@energy.ca.gov. Include in your
18 subject our docket proceeding number which is 14-ALT-01. And
19 then I ask that you cc: me, as well, just so that we get it
20 that much sooner.

21 From there we will be developing the Lead
22 Commissioner Report. We hope to release that in mid-March.
23 And then in -- around April 9th, I think, is our expected
24 Commission Business Meeting. We will be taking the Lead
25 Commissioner Report to the full Commission for approval.

1 Assuming it gets approved we will have it by May 15th to
2 distribute, again, to the relevant policy and fiscal
3 committees of the legislature, May 15th being our deadline to
4 do so.

5 And so I'll just leave this slide up. It's again
6 our funding summary of proposed allocations. And that's what
7 I have.

8 UNIDENTIFIED MALE: Can you briefly go back to your
9 email address?

10 COMMITTEE MEMBER SMITH: Oh, yes. I've been asked
11 to go back to my email address. Sorry if I sped through that.
12 Charles.Smith@energy.ca.gov. And the docket office again is
13 docket@energy.ca.gov. So I'll leave that up for a little
14 longer.

15 PRESIDING MEMBER SCOTT: And we are posted online,
16 right, so people can -- the presentation is posted online --

17 COMMITTEE MEMBER SMITH: Yeah.

18 PRESIDING MEMBER SCOTT: -- so people can --

19 COMMITTEE MEMBER SMITH: Oh, the presentation has
20 not been posted yet but it will be, yeah. All right.

21 Do we want to do comments or clarifying questions?

22 PRESIDING MEMBER SCOTT: Do we have any clarifying
23 questions from the Committee Members here at the table? All
24 right. Any Committee Members on the phone?

25 Oh, I'm sorry. Go ahead, Erik.

1 COMMITTEE MEMBER WHITE: That's okay. This is Erik
2 White with -- with ARB.

3 Charles, a question for you. You --

4 COMMITTEE MEMBER SMITH: Uh-huh.

5 COMMITTEE MEMBER WHITE: In response to Bonnie's
6 question you had indicated Table 14 kind of lays out some of
7 the infrastructure, EV infrastructure needs that you're going
8 to need. When you talk about home dominant, what is the role
9 of multi-unit dwellings in there? And I ask from the
10 perspective of you've been very good about -- you've been very
11 good about getting them installed and have been very
12 successful, but that seems to be a glaring area where
13 additional work in investment needs to -- needs to go in.

14 COMMITTEE MEMBER SMITH: Yeah.

15 COMMITTEE MEMBER WHITE: So how does that fit into
16 what you see as the -- as necessary for the -- to meet some of
17 the Governor's goals?

18 COMMITTEE MEMBER SMITH: Yeah, that is -- that is --
19 you're definitely right. That is a high priority area for us.
20 My understanding is that in Table 14 the multi-unit homes are
21 incorporated as part of that residential charging. So yeah.

22 COMMITTEE MEMBER WHITE: Okay.

23 COMMITTEE MEMBER SMITH: Oh. Bonnie?

24 COMMITTEE MEMBER HOLMES-GEN: On that -- on that
25 same part, right --

1 COMMITTEE MEMBER SMITH: Uh-huh.

2 COMMITTEE MEMBER HOLMES-GEN: -- there's a couple of
3 different scenarios laid out.

4 COMMITTEE MEMBER SMITH: Uh-huh.

5 COMMITTEE MEMBER HOLMES-GEN: And is there a number
6 in that range that -- that you -- that the Energy Commission
7 is aiming toward, or how are you using these numbers?

8 COMMITTEE MEMBER SMITH: It's sort of a benchmark
9 for where -- where we would expect to need to be, somewhere
10 within that range between the two different scenarios. It
11 kind of gives us an idea for the -- the scale of investment
12 that is appropriate for us. I mean, if you take that number
13 of -- or that range of necessary chargers and you can, you
14 know, make realistic assumptions about how much it has cost
15 our program to support a charger of any given variety in the
16 past, you can extrapolate that into the amount of funding that
17 might be needed in the -- in this Investment Plan.

18 COMMITTEE MEMBER HOLMES-GEN: All right. I assume
19 that it's -- it would be helpful to get more information on
20 how this PUC decision, I mean, how that is going to be
21 implemented --

22 COMMITTEE MEMBER SMITH: Yeah.

23 COMMITTEE MEMBER HOLMES-GEN: -- before you can
24 probably understand the gap --

25 COMMITTEE MEMBER SMITH: Yeah.

1 COMMITTEE MEMBER HOLMES-GEN: -- more clearly.

2 COMMITTEE MEMBER SMITH: Exactly. And those -- so
3 two things about those utility rollouts, one being that we --
4 we do still want to get more information about, you know,
5 whether those are going to be predominantly destination
6 chargers, predominantly fast chargers, predominantly multi-
7 unit dwelling chargers, again, to give us an idea of where
8 those gaps are so that we can target our funding more
9 appropriately. But also those are four- to five-year plans.
10 So obviously we need to keep the ball moving ahead of -- ahead
11 of that time. So that's why we are continuing to try to be
12 very engaged on this charging infrastructure category.

13 COMMITTEE MEMBER HOLMES-GEN: Uh-huh. Okay.

14 PRESIDING MEMBER SCOTT:

15 MR. RIVERA: I had a question in regards to the
16 multi-unit homes and dwellings.

17 PRESIDING MEMBER SCOTT: Can you -- do you mind
18 coming to the mike --

19 MR. RIVERA: Pardon me.

20 PRESIDING MEMBER SCOTT: -- so that the folks on the
21 phone can hear you.

22 MR. RIVERA: Good afternoon. Michael Rivera with
23 the Office of Assembly Member Perea. Question, and just for
24 clarifying because I don't have the information in front of
25 me, but is there any baseline definition or is there a sought

1 after number of the number of housing units or household
2 members that would actually qualify for the multi-housing unit
3 infrastructure plan?

4 COMMITTEE MEMBER SMITH: Oh, like how -- how many
5 units need to be in --

6 MR. RIVERA: Yes.

7 COMMITTEE MEMBER SMITH: I don't think we have
8 developed any firm definition of that in the past, no.

9 MR. RIVERA: Thank you.

10 PRESIDING MEMBER SCOTT: Anyone else? Anyone on the
11 phone?

12 COMMITTEE MEMBER SMITH: Okay. Oh, John Shears, go
13 ahead.

14 COMMITTEE MEMBER SHEARS: Yeah. Can folks hear me
15 okay?

16 COMMITTEE MEMBER SMITH: Yeah.

17 COMMITTEE MEMBER SHEARS: Great. Yeah. So first
18 just an observation, and I've talked with PUC staff and ARB
19 staff about this, as well, that we need to remain vigilant
20 with regards to the utility pilots on EV deployment and how
21 the state is targeting -- targeting the money. We also need
22 to closely monitor what is happening or is going to be
23 happening, the exact shape of the pilots that are still being
24 discussed at the PUC in terms of mere mid-term and longer-term
25 effects of the pilot within the service territories at each of

1 the utilities. In the near term there may be -- may be
2 benefits and dis-benefits to each. They're using different
3 approaches. Certainly there are issues that have -- already
4 been raised by other business interests that want to work in
5 this space with regards to at least two of the pilots that
6 have been proposed to the PUC.

7 So it's something I think that the agencies that are
8 working on incentivizing and helping industry to develop this
9 market needs to monitor closely so that we have a good handle
10 on exactly, you know, how the deployment decisions and the
11 incentive monies is really reaching maximum effect. I just
12 wanted to make that observation.

13 And then I had a question regarding intelligent
14 transportation systems. I'm just curious as to why it's
15 limited in the context of -- of the Investment Plan to medium-
16 and heavy-duty advanced vehicle technology demonstration. So
17 for example, the City of Fresno, where those of you who are
18 healthy enough to be attending the Advisory Committee meeting
19 today, the City of Fresno has been developing its own
20 intelligent transportation system broadly to manage, you know,
21 just day to day urban traffic flows within the City of Fresno.
22 And I think there's a great advantage with helping the various
23 regions, especially, you know, the urban centers within the
24 various regions. This could be a very helpful approach for
25 them and their -- their SB 375 goals.

1 So I was just wondering if you could maybe elaborate
2 more on the thinking around the inclusion of intelligence
3 transportation systems? Because right now it seems like maybe
4 you're thinking of applications like emlittuning (phonetic) in
5 that which is a rather limited application of use of
6 intelligent transportation systems.

7 COMMITTEE MEMBER SMITH: Sure. So this is Charles.
8 Thank you, John.

9 I think a big part of the reason that we have -- had
10 based intelligent transportation system consideration in the
11 medium- and heavy-duty demonstration category was that that
12 was what we had been confronted with it in the past. I don't
13 know that we have necessarily had much information presented
14 to us about sort of citywide ITS that also looks at passenger
15 cars and so forth. So that is certainly something that we
16 would -- we would like to hear more about.

17 Jim?

18 COMMITTEE MEMBER MCKINNEY: Yeah. Jim McKinney.

19 If I can add to what Charles said, so the -- the
20 meetings that we have been to on clean freight and ITS hosted
21 by Caltrans and the Air Resources Board really have focused on
22 the trucking sector, so that's why we've framed it this way.

23 But I would just say thank you, Mr. Shears, for
24 bringing that to our attention and introducing that into the
25 record.

1 COMMITTEE MEMBER SHEARS: Yeah. Because I would
2 just like to add, too, that, you know, with the increased
3 capacity that's now being placed within passenger vehicles in
4 terms of telematics and the ability of the cars, you know,
5 to -- themselves to be equipped with equipment that allows
6 them to communicate in various means, the power of intelligent
7 transportation management will increase many times. So it
8 might be something to workshop, sort of as a sidebar workshop,
9 to the next Investment Plan, bring in some of the car
10 companies and transportation planners and sort of explore
11 this -- this area a little further.

12 COMMITTEE MEMBER SMITH: Yeah. That is -- that is
13 an interesting point. I know there have been a lot of
14 developments, especially with discussion to the possible
15 future of -- of driver-less vehicles. And so there -- there
16 probably is a lot of information out there that we could
17 expand on that we just haven't gotten to in the past, but it
18 certainly would be of interest to us in the future.

19 Any other Advisory Committee Member -- Bonnie, here
20 at the table.

21 COMMITTEE MEMBER HOLMES-GEN: Yeah. I just wanted
22 to see if I could get clarification. We've talked a lot about
23 the needs in the valley. And I don't want to keep just going
24 on about this, but I just wanted to see if there's some
25 clarity about -- you talk about adding some additional

1 criteria to the project's selection in terms of looking at
2 disadvantaged communities. And I just wanted if there's more
3 clarity you can provide --

4 COMMITTEE MEMBER SMITH: Sure.

5 COMMITTEE MEMBER HOLMES-GEN: -- about what's going
6 to happen going forward in trying to target projects more in
7 this area and in other under-served communities? And I'm
8 sorry, I don't want to be repetitive, but I just wanted to get
9 clarity about that.

10 COMMITTEE MEMBER MCKINNEY: Jim McKinney, Commission
11 Staff.

12 No, it's -- it's a good question, Bonnie. And I
13 think that both Charles and I neglected to say in our
14 presentations that nearly all of our solicitations now have
15 what we call a bump-up consideration for projects either
16 located in or benefitting disadvantaged communities. And so
17 far that ranges from 5 percent to 10 percent of a bonus score
18 to recognize the additional benefits of placing them in such
19 areas.

20 PRESIDING MEMBER SCOTT: Understand that both the --
21 Chair Weisenmiller with respect to the EPIC program and me
22 with respect to this Alternative and Renewable Fuel and
23 Vehicle Technology Program have made a commitment to be sure
24 to also track that type of data. And we're still kind of
25 putting it together in a way that's digestible. But we will

1 be tracking the information. As -- as Jim mentioned, we're
2 targeting the money at some of the communities. We have to be
3 a little bit careful because we can't -- we can't put a
4 solicitation out most of the time that just says, oh, only
5 companies here can apply; right? So there -- but there are
6 ways that we can do the -- the kind of geographic distribution
7 and monitor our progress towards that.

8 And we're also trying to put some incentives in for
9 minority-owned business, women-owned business, disabled
10 veteran-owned businesses as well. And so you'll start to see
11 that weaving through the, as Jim mentioned, the solicitations.
12 And as we figure out how to track that we will try to put it
13 up on our webpage, kind of the way we did our map where you
14 can see where all the projects are across the state and things
15 like that. So I just wanted to add that too.

16 COMMITTEE MEMBER HOLMES-GEN: And when was that
17 bump-up provision incorporated?

18 PRESIDING MEMBER SCOTT: Oh, what's the (inaudible)
19 one?

20 COMMITTEE MEMBER SMITH: It's been there through
21 quite a few of our solicitations.

22 COMMITTEE MEMBER HOLMES-GEN: So it has -- it's been
23 there?

24 COMMITTEE MEMBER SMITH: Yeah. Sometimes it's more
25 explicit than others. But I -- as far as I can recall it's

1 been in most of our solicitations.

2 COMMITTEE MEMBER MCKINNEY: Yeah. And even going
3 back to our first solicitations in 2010, we used different
4 terminology but it was the same idea, to have additional kind
5 of scoring points available to companies that kind of maximize
6 benefits and under-served or disadvantaged communities.

7 PRESIDING MEMBER SCOTT: And let me just add, too,
8 we're not going to -- we're not recreating the wheel there.
9 We're using the CalEnviroScreen for a lot of this. So I just
10 wanted to mention that too.

11 COMMITTEE MEMBER HOLMES-GEN: So, yeah, that's --
12 that's helpful. And it seems like, again, this whole issue of
13 how do we encourage and assist local -- local officials and
14 companies and individuals that have the capability of doing
15 these projects to bring them forward. So that really seems to
16 be a big issue. I know the Air Boards and the Energy
17 Commission are working on that. And just would appreciate it
18 if continued discussions move forward about how to do that.

19 PRESIDING MEMBER SCOTT: One other thought on that.
20 The other -- the other thing that we are doing, and I'm so
21 delighted that Assembly Member Perea -- that Michael has
22 joined us today, because we're also trying to work with our --
23 our friends in the legislative districts because your -- their
24 distribution lists are different than our distribution lists;
25 right? You kind of have to self-select yourself and know that

1 the Energy Commission is there and what we do to get onto
2 our -- and so we're trying to reach a broader set of people.
3 And the -- our legislative friends have been great about that.
4 Like they'll take a solicitation notification, for example,
5 and forward it out to folks that they think might be
6 interested in it. And so if you have ideas about other ways
7 that we can continue to get the word out, we're always looking
8 for -- for information on that.

9 COMMITTEE MEMBER MCKINNEY: Yeah. Jim McKinney.

10 And if I can refer back to some of the discussions
11 we had last year with our IEPR proceeding, again under
12 Commissioner Scott's leadership, and I think Erik, you and
13 some of your colleagues made these points, but there are lots
14 of different ways to think of and categorize benefits from
15 public funding programs such as this, so air quality
16 improvement, economic development, technology development.

17 So it really -- there are really a lot of different
18 ways to think about this. And I think that's important
19 because as I said in my opening comments, there's a lot of
20 biofuels money that's already been spent here in the valley,
21 and the economic multipliers from that are prodigious. On the
22 EVSC side it's lower. The CVRP voucher numbers that I pulled,
23 I think they are still just shy of 2,000 vehicles in the
24 valley. So clearly lots of room for improvement there. But
25 there are lots of different ways to think about how different

1 parts of our funding stream can create different categories of
2 benefits, you know, kind of throughout the valley and the
3 state.

4 COMMITTEE MEMBER SMITH: Okay. Any other Advisory
5 Committee Members on the phone with comment?

6 Eileen Tutt, go ahead.

7 COMMITTEE MEMBER SMITH: Hi Charles. Thank you. I
8 wanted to ask to -- Charles, to your point earlier, and sort
9 of in response to John Shears' comment, as well, in terms of
10 the PUC proceeding and the utility applications, the decisions
11 won't come certainly before October this year. The proposals
12 all ramp up slowly. So I'm not sure that the '15-16 funding
13 cycle that we -- that -- that the -- that there's any conflict
14 with those investments or any overlap there just because it
15 does -- the PUC process can -- can be a little slow and
16 thoughtful. And so I don't see the -- this Investment Plan
17 and how we allocate money in this Investment Plan being --
18 being conflicted or overlaid with what's happening with the
19 PUC and what the utilities investment will be. I think
20 they're kind of separate for now.

21 But John's right, as we go forward we're going to
22 want to make sure that all these different investments in --
23 in, particularly, EV infrastructure are coordinated to reach
24 the maximum potential benefits.

25 So that -- that said, my question really is that,

1 Charles, you mentioned that the Regional Readiness programs
2 were oversubscribed. You know, in my world I got a lot of
3 very positive feedback from those that applied and actually
4 got those -- those Regional Readiness Planning Grants.
5 There's -- there's quite a bit of good work being done
6 locally. It strikes me as another opportunity for the valley,
7 certainly this pot of money.

8 So I very much support the idea of considering
9 adding that money back in. I just think a lot of action is
10 needed at the local level. And since I wish I was in -- I
11 wish I was with you there, but since we are in Fresno there,
12 there in spirit or in body, that it is kind of appropriate to
13 think about whether or not more regional money might be
14 helpful.

15 The only thing that I would question is I'm not sure
16 that it's an automatic decision that we would take the money
17 from the EV charging infrastructure. Because it think what
18 I -- I would assume that's also quite oversubscribed. So my
19 sense is that I would look at these numbers and think about is
20 there -- are there places where -- where there's under-
21 subscription and if so -- or is there a potential for more
22 than \$100 million coming in this year? And that to me seems
23 like a better alternative than, you know, siphoning off money
24 from another oversubscribed category. Now if they're all
25 oversubscribed, of course, then we've got a challenge in front

1 of us. But I would -- I would necessarily assume that the
2 place -- to take the money -- the needed money for Regional
3 Readiness to the electric charging infrastructure.

4 COMMITTEE MEMBER SMITH: Yeah. Yeah. Thank you,
5 Eileen. Yeah.

6 COMMITTEE MEMBER SHEARS: This is John Shears, and I
7 support Eileen's remarks.

8 COMMITTEE MEMBER SMITH: Okay. Thank you. Thank
9 you both.

10 So generally speaking oversubscription, for better
11 or for worse, does tend to be the norm around here. It's a
12 good problem to have. And so I don't know whether we can
13 anticipate any of these categories being undersubscribed based
14 on our previous experience. But you know, it is certainly
15 something that we keep an eye open for.

16 PRESIDING MEMBER SCOTT: Also the legislation caps
17 us at -- and I think AB 8 has this too, I know AB 118 had
18 it -- we're capped at \$100 million. So if there were lots and
19 lots of vehicle registrations and there was more funds than
20 that, we still only get the \$100 million. And of course, if
21 there's less vehicle registrations and it's less than \$100
22 million then we have to ratchet down a little bit by that --
23 by that difference. But I'm pretty sure AB 8 also has that
24 cap. So if additional money came in over the \$100 million I
25 don't know where it goes, but it doesn't come to this program.

1 COMMITTEE MEMBER CARMICHAEL: At this point you're
2 just asking for clarifying questions, not comments on the
3 draft; right?

4 COMMITTEE MEMBER SMITH: Yeah.

5 COMMITTEE MEMBER HOLMES-GEN: Question. This is
6 Bonnie again.

7 And the question is you mentioned on the methane
8 leakage that there's information forthcoming about the extent
9 and the implication for conventional natural gas. And I know
10 I asked last time, but I just was wondering if you could
11 provide any more information, where we're at, when we'll have
12 that information? I assume that's all part of the LCFS. But
13 just any -- any idea about timing?

14 COMMITTEE MEMBER SMITH: Last I checked, and I know
15 whether, Tim, whether you're in a position to add to this, but
16 I think I remembered that of the maybe 15 or so EDF projects
17 that were looking at this issue, at last check maybe four or
18 five would either completed or nearing completion. And so
19 there were still quite a few to be expected, I think
20 throughout the course of this calendar year.

21 Tim, I don't know if you have more information than
22 that?

23 COMMITTEE MEMBER CARMICHAEL: No, I think that's
24 correct. I have seen a table that shows the report subject
25 and anticipated release date, but that has slid for almost

1 every report. I'd be happy to share that with Staff just as
2 an information point. It doesn't necessarily need to be part
3 of the record on this report.

4 COMMITTEE MEMBER SMITH: Sure.

5 COMMITTEE MEMBER CARMICHAEL: But, yes, we're
6 anticipating between 10 and 12, not just EDF but other, you
7 know, USEPA, ARB, you know, 10 to 12 reports --

8 COMMITTEE MEMBER SMITH: Okay.

9 COMMITTEE MEMBER CARMICHAEL: -- during the course
10 of this calendar year.

11 COMMITTEE MEMBER SMITH: Yeah. Yeah, we'd certainly
12 be interested in seeing that sort of summary table. I'd be
13 very interested.

14 COMMITTEE MEMBER MCKINNEY: Yeah. Jim McKinney.

15 If I can -- can add, so under, I think it's AB 1257
16 in our 2015 Integrated Energy Policy Report we're obligated by
17 legislation to report more fully.

18 Back to your question, Bonnie, on upstream methane
19 leakage rates, and also on remedies that are available or are
20 in proposal, so we know the White House has got the initial
21 set of Energy Star recommendations to start to curtail methane
22 leakages, both at the wellhead and at other kind of key points
23 in the distribution process. And I think we had a pretty
24 lively discussion at the Technology Assessment Workshops at
25 the Air Board over just some of the accounting and allocations

1 of methane from different types of well activity in
2 California, whether it's oil, enhanced oil recovery, natural
3 gas recovery, etcetera. So a lot of technical work still to
4 be done in that area.

5 COMMITTEE MEMBER CARMICHAEL: Yeah, I guess I would
6 just -- I totally agree with everything Jim just said. But
7 for those that don't track this there are a lot of facets to,
8 you know, extracting the fuel from the ground or producing the
9 fuel and getting it into the vehicle, whatever the vehicle is.
10 But this -- and I choose my words that way because it also
11 applies to renewable natural gas, at least some of these
12 facets. But you've got -- you've got studies looking at the
13 extraction. You've got studies looking at the pipelines and
14 moving the gas, processing the gas, the processing systems.
15 And then you've got the stations themselves, and then the
16 vehicles themselves.

17 So there's a lot of different pieces of the puzzle,
18 some of which we have a good handle on today and some of which
19 we don't. And that's why these upcoming reports are so
20 anticipated and are going to be so valuable.

21 I tend to agree on Jim based on what I know so far,
22 the industry feels like the vast majority of issues that have
23 been identified are going to be technologically fixable or
24 they're going to be addressable. So, you know, the industry
25 is quite optimistic, bullish on being able to address issues

1 that are -- that are going to come forward.

2 PRESIDING MEMBER SCOTT: Let me turn to -- I think
3 we've got one more comment on the phone from Will Coleman.
4 And let's -- if anybody else has a burning clarifying question
5 that they want to ask, feel free. But then after -- after
6 Will we might want to break for lunch, and then we can resume
7 around 1:30.

8 COMMITTEE MEMBER COLEMAN: Yeah. I've just -- I've
9 just got a question on the biofuel allocation. And just in
10 looking at that I know for the last couple plans it's been
11 mostly focused on production and supply, not infrastructure.
12 And I'm just curious what the thinking is behind that given,
13 you know, where we're at in terms of supply, where we're at in
14 terms of blending walls and current deployment of
15 infrastructure. Is there -- is there a reason we backed off
16 of additional infrastructure at this point? And so how are
17 you guys thinking about that?

18 COMMITTEE MEMBER SMITH: So looking at biofuel
19 infrastructure, I guess I'd start by splitting it in two, for
20 E85, for the gasoline subsidies portion, and then I presume
21 you're referring to upstream biodiesel and perhaps renewable
22 diesel infrastructure. So --

23 COMMITTEE MEMBER COLEMAN: I'm referring to -- I'm
24 referring to both, actually.

25 COMMITTEE MEMBER SMITH: Yeah. Yeah. So -- so for

1 E85 we do have a few outstanding awards for E85 facility
2 installation. Those are -- those are still proceeding. And I
3 think we're trying to get through those existing agreements
4 and collect some -- some data where we can on the -- the
5 throughput levels for those new stations, and then evaluate
6 what kinds of retail infrastructure we might consider in the
7 future.

8 For -- for renewable diesel upstream infrastructure,
9 our general sense has been that this wasn't as high of a
10 priority as just getting more renewable diesel produced. For
11 biodiesel infrastructure where it's maybe not as fungible, at
12 least not beyond B5 levels, I think we're still very
13 interested in hearing more about the infrastructure challenges
14 that may be currently arising. That could give us a sense for
15 what the need is for future investment.

16 COMMITTEE MEMBER COLEMAN: Okay. Now on the E85
17 side, how much -- how many total dollars have gone into that
18 infrastructure?

19 COMMITTEE MEMBER SMITH: I think Jim may have had
20 that in his slide. So I'll ask -- we're racing through the
21 presentations to see.

22 COMMITTEE MEMBER COLEMAN: So as you're looking, so
23 the concern with additional E85 deployment is a utilization
24 question?

25 COMMITTEE MEMBER SMITH: Oh, Jim -- Jim has it here.

1 COMMITTEE MEMBER MCKINNEY: Yeah, Will. Jim
2 McKinney here.

3 Yeah, so if you can go to slide 24 of my
4 presentation. So we've got \$14.6 million for 161 E85
5 stations. And I think I need to note that we had to cancel an
6 earlier round of awards. So we had, I think 202 E85 stations
7 we were funding. And due to relatively slow development in
8 that market and inability to meet our funding deadlines we had
9 to cancel some of those.

10 So I think in addition to throughput it's really
11 we're looking for kind of stronger consumer response in this
12 area to decide whether we want to open this up again to -- for
13 funding considerations.

14 COMMITTEE MEMBER COLEMAN: Okay. And you cut out
15 there for a second for me, but okay.

16 Do we -- do we do education programs in terms of
17 deployment as well? Is that part of the -- the funding, you
18 know, whether it's around EV charging, hydrogen, biofuel,
19 etcetera?

20 COMMITTEE MEMBER SMITH: That -- a lot of that would
21 probably be unique to each agreement.

22 COMMITTEE MEMBER MCKINNEY: And I think if I can
23 add -- Jim McKinney again -- that is also something that the
24 Regional Readiness plans I think would be well suited to -- to
25 address as to get out that kind of consumer-level information

1 on the benefits and attributes of these different alternative
2 fuels.

3 And I think Joe wanted to make a comment?

4 COMMITTEE MEMBER GERSHEN: Real quick clarifying but
5 not burning question is those contracts that get canceled, do
6 those funds go back to biofuels or do they just go to the
7 general?

8 COMMITTEE MEMBER SMITH: Those funds go to the, I
9 shouldn't say general fund because that's the state's fund.
10 They go to the ARFVT Fund.

11 COMMITTEE MEMBER GERSHEN: But still allocated to
12 biofuels or --

13 COMMITTEE MEMBER SMITH: No, no. It's --

14 COMMITTEE MEMBER GERSHEN: And the question would be
15 why?

16 COMMITTEE MEMBER SMITH: It's --

17 COMMITTEE MEMBER GERSHEN: Why not?

18 COMMITTEE MEMBER SMITH: -- mostly just based on the
19 state's budgeting process, as I understand. I mean, if the
20 funds aren't liquidated through us then we -- we don't even
21 have the funds at that point. It would have to be re-
22 appropriated to us through the legislature.

23 COMMITTEE MEMBER GERSHEN: Is it not the case with
24 other things that don't get allocated, do they go back to the
25 same categories or no?

1 COMMITTEE MEMBER SMITH: What I'm describing is true
2 for all of our project types if that's -- if that answers your
3 question.

4 COMMITTEE MEMBER CARMICHAEL: A distinction, I
5 think. There are projects where it -- you are trying to make
6 it work for so long that the clock runs out on that project.
7 And when it shuts down and they have to give the money back it
8 doesn't go to the CEC. It goes back -- it's not in your
9 control anymore, is my understanding.

10 COMMITTEE MEMBER SMITH: Correct.

11 COMMITTEE MEMBER CARMICHAEL: But I was under the
12 impression that there are some projects that you know early
13 enough that something is not going to work, and that money
14 does come back to the CEC and you have a limited window --

15 COMMITTEE MEMBER SMITH: Yes.

16 COMMITTEE MEMBER CARMICHAEL: -- to reallocate
17 the --

18 COMMITTEE MEMBER SMITH: Yeah. Yeah.

19 COMMITTEE MEMBER CARMICHAEL: Can you just speak to
20 that?

21 COMMITTEE MEMBER SMITH: Let me touch on that. So
22 we have two years to execute an agreement, and then after that
23 four years to liquidate. The legislature has a special
24 provision unique to hydrogen that's four years to execute and
25 four years to liquidate, but that's separate. So if within

1 that two-year window, that is, you know, two years after July
2 1st of the -- of the fiscal year for which we have that money,
3 if we sense that a project is not going to get completed
4 the -- one prospect of what we might do, for instance, would
5 be to just go down the list of the most recent notice of
6 proposed award for that category and fund the next project on
7 that list. But that does depend on it happening within that
8 two-year window.

9 COMMITTEE MEMBER GERSHEN: I think some of the
10 question comes from the fact that, and I'll comment more on
11 this later, but there certainly is a need for infrastructure.
12 And so it's -- it's tough to see if there are funds allocated
13 and they don't get used that it then doesn't go back to
14 biofuels because there are -- there's real need in the
15 infrastructure. So thanks.

16 COMMITTEE MEMBER SMITH: Thank you.

17 COMMITTEE MEMBER SMITH: Yeah, Jim?

18 COMMITTEE MEMBER MCKINNEY: Yeah. I wanted to
19 clarify one of my responses to Will Coleman's question on the
20 number of hydrogen fuel cell vehicles projected in California.
21 I slipped a decimal point. So according to the AB 8 survey
22 reported in June of 2014, 6,650 vehicles are projected through
23 2017, rising to 18,465 in 2020. That's on page 41 of the
24 current draft of the Investment Plan. And if you go to the
25 corresponding tables under California Fuel Cell Partnership

1 Roadmap Update and the California Air Resources Board AB 8
2 Report, there are similar charts that show the capacity of the
3 currently funded infrastructure system to accommodate those
4 vehicles. And so everything that we're funding now would be
5 used out in that outer timeframe of the 18,500 on vehicles or
6 so. So --

7 COMMITTEE MEMBER SMITH: Okay. All right.

8 PRESIDING MEMBER SCOTT: All right. Thank you,
9 Charles, very much --

10 COMMITTEE MEMBER SMITH: Thank you.

11 PRESIDING MEMBER SCOTT: -- for your excellent
12 presentation.

13 It is 12:45. I don't know how close lunch options
14 are to here.

15 COMMITTEE MEMBER SMITH: Oh, yeah. Maybe --
16 actually, Todd, could you come up here and just --

17 PRESIDING MEMBER SCOTT: Yeah, that would be great.

18 COMMITTEE MEMBER SMITH: -- give a little
19 announcement.

20 PRESIDING MEMBER SCOTT: I'm trying to decide if we
21 can -- if we should start again at 1:30 or do we need a full
22 hour to kind of get out and get back. So let's hear from
23 Todd.

24 MR. DEYOUNG: Yes. There are a couple of options
25 that are very close, within walking distance. Gettysburg

1 Avenue is right out here. If you go right, just down at the
2 corner of Gettysburg and Fresno there's a Mediterranean
3 Restaurant that's really good. If you're into something more
4 casual, if you go left, down to the corner is probably the
5 best burrito shop in Fresno. If you're interested in a
6 burrito, Don Pepe's is right there on the corner. If you want
7 to drive a very short distance, less than a mile, go down to
8 Fresno Street which is the next intersection here and just go
9 up to Shaw, and there's any number of restaurants, Cheesecake
10 Factory, BJ's, casual dining, things like that. And then
11 there's any number of fast food restaurants on Blackstone,
12 which is just right over here. So plenty of -- plenty of
13 close options.

14 PRESIDING MEMBER SCOTT: So what's the sense around
15 the table here? Do you think we need an hour?

16 COMMITTEE MEMBER CARMICHAEL: Well, I don't want to
17 be selfish, but Bonnie and I probably need to leave at 2:45 or
18 2:50 to catch our train.

19 PRESIDING MEMBER SCOTT: Okay.

20 COMMITTEE MEMBER CARMICHAEL: So I would push for 45
21 minutes if we can do it.

22 PRESIDING MEMBER SCOTT: Okay.

23 PRESIDING MEMBER SCOTT: Okay. So we are -- we will
24 reconvene at 1:30. If you're still eating, it's fine. Just
25 bring it back to the table or bring it back to the room and

1 we'll keep going. See you all at 1:30.

2 (Off the record at 12:45 p.m.)

3 (On the record at 1:34 p.m.)

4 PRESIDING MEMBER SCOTT: Hello everybody. Welcome
5 back. We are now to the discussion part of the session. And
6 so I'll turn it over to Jim or Charles. Which one of you is
7 going to lead us up?

8 COMMITTEE MEMBER MCKINNEY: Yeah. I thought it was
9 me but --

10 PRESIDING MEMBER SCOTT: Okay.

11 COMMITTEE MEMBER MCKINNEY: So welcome back. So the
12 way we run this part of the discussion is that we will go
13 through topic by topic on the funding chart you see on the
14 screen or in your handout. And what we do is -- so we'll
15 start with biofuels. We will take policy comments, questions,
16 whatever recommendations Committee Members have starting here
17 on the table, then going to Committee Members on the phone,
18 and then turning to the public here, and then public on the
19 phone.

20 So with that I'd like to --

21 PRESIDING MEMBER SCOTT: Remind folks, if you're in
22 the room and you want to say something, don't forget to give
23 us your blue card so we know to call on you.

24 COMMITTEE MEMBER MCKINNEY: So with that I'd like to
25 open it to Committee Members here at the table. Start with

1 Joe and Tim.

2 COMMITTEE MEMBER GERSHEN: Thanks Jim. Joe Gershen
3 with California Biodiesel Alliance. In deference to
4 everyone's schedule, I know everyone's got to leave, I'll try
5 to make this brief. I want to thank Staff for doing a great
6 job. Good update. Good presentations.

7 I wanted to point out that you guys talked about
8 petroleum prices coming down. Well, they're coming back up.
9 And I think that really sort of highlights the fact that
10 there's a lot of volatility, and there always has been and
11 there always will be. Part of the thing that's great about
12 this program and what the state is doing is by introducing
13 diversity it hopefully takes -- sort of levels the field a bit
14 and you have less volatility.

15 Now initially while we're getting this going it's
16 difficult -- it's been difficult in the -- in the biodiesel
17 industry, these prices going low. It makes it difficult to --
18 to make money, quite frankly. But, you know, I think
19 everyone's pulling together and there's -- there's some great
20 stuff going on.

21 That being said, as I'm sure you guys have expected
22 I still -- we -- we -- CBA still has some concerns about
23 metrics, objective metrics for evaluating budget allocations.
24 And we think biodiesel allocation remains significantly
25 underfunded. I realize, you know, there's a lot of

1 oversubscription, and clearly there is in all the biofuels,
2 but biodiesel certainly is.

3 I think back in June several Committee members sent
4 a letter to you guys which asked to maybe set up a special
5 advisory committee or advisory panel, that that be formed that
6 we could come up with -- create our own metrics methodology,
7 and we'd still like to have that meeting. We just wanted to
8 reiterate that for the record. You know, this is sort of
9 consideration for -- in evaluating programs and guiding future
10 ARVT budget allocations.

11 In this Investment Plan we note that it appears that
12 diesel substitutes have received about ten percent of program
13 funding since its inception. But we feel strongly this
14 category, and biodiesel in particular, has been providing
15 significantly more than ten percent of program benefits. We
16 know that in 2014, for example, biodiesel provided about 16
17 percent of all the LCFS credits generated according to --
18 according to ARB data.

19 I wanted to just -- again, I'll try to skip through
20 some of these things. And we'll prepare written comments
21 which we'll submit later. We -- I want to appreciate that Jim
22 noted the -- biodiesels contribution, and I want to support
23 that. I think it was great.

24 I'd like to share a few metrics that might be --
25 might have been overlooked, but think it's quite illustrative

1 of biodiesel's contribution. So currently in-state biodiesel
2 production capacity of 59 million is what we had, but I'm -- I
3 stand corrected, it's 78.8 I think.

4 So everything -- all these figures will be about 30
5 percent higher than I'm about to read. So at that 59 million
6 gallons per year it's created hundreds of high-paying green
7 jobs in some of the most disadvantaged communities in the
8 state, the CalEnviroScreen, stuff we've been talking about,
9 while it's reduced over 800 -- well, with the adjustment, over
10 800,000 metric tons of carbon emissions from our atmosphere.
11 This production capacity is also equivalent to removing almost
12 185,000 cars from California roads.

13 COMMITTEE MEMBER HOLMES-GEN: 185?

14 COMMITTEE MEMBER GERSHEN: 185. Now it was 140,000,
15 but with this higher capacity, production capacity, I did a
16 quick back of the napkin while we talked and it looked like
17 more like about 185,000.

18 Preliminary estimates are showing that biodiesel
19 plants contributed approximately \$350 million in economic
20 activity to California's economy in 2014. This is the year
21 that just ended. And with consistent support our industry can
22 quickly increase in state capacity to 200 million gallons per
23 year, which is about a B5 level. And that would generate \$2
24 billion in economic impact annually. So the multipliers for
25 jobs created in communities like here in the Central Valley is

1 really tremendous.

2 For every \$1,000 invested from this program the
3 biodiesel industry can delivery close to 1,350 gallons of
4 ultra-low carbon biodiesel production per year, which in turn
5 would reduce 14 tons of climate-changing carbon emissions from
6 our atmosphere. Like that's taking over three cars off the
7 road for every \$1,000 spent. Additionally, based on current
8 market economics, this \$1,000 investment would generate
9 recurring economic contributions of about \$5,400 a year. And
10 if we bring our in-state production capacity up to 200 million
11 gallons a year it would be equivalent to taking an additional
12 332,000 cars off the road and taking an additional 1.4 million
13 metric tons of carbon emissions out of the atmosphere every
14 year, all while creating hundreds of high-paying permanent
15 jobs and contributing about \$2 billion to the state's economy.

16
17 We think that's pretty compelling, and we just
18 wanted to say that. So thanks. I'll -- I'll finish now.
19 Thanks very much again. Great job today.

20 COMMITTEE MEMBER MCKINNEY: Great. Thank you, Joe.
21 Tim Carmichael?

22 COMMITTEE MEMBER CARMICHAEL: First, Tim Carmichael
23 with the Natural Gas Vehicle Coalition. First, I want to just
24 chime in on the thanks to the Air District. I haven't been
25 down here in a while. I was wearing a different hat last time

1 I was down here five-and-a-half years ago. But I appreciate
2 them hosting today and giving a presentation at the beginning.
3 That was great.

4 On the biofuel production supply, I want to focus on
5 the supply piece of this. And I want to share that there's an
6 ongoing challenge in the biomethane sector of actually getting
7 your fuel to market for fuel that's produced in the state.
8 And part of it is connecting to the pipeline system. Part of
9 it is the regs that PUC is still working through on what
10 criteria or what standards the gas has to meet. It's worth
11 noting that the current, you know, standard on the book is
12 actually more stringent than the natural gas that's moving
13 through the pipelines. And it's technically feasible, but the
14 debate is ongoing as to whether it can be met in a cost
15 effective way and still, you know, make the fuel price
16 competitive in the marketplace.

17 So I just want to flag this as an issue that I think
18 the CEC should do a little bit more investigation on. And
19 there's, you know, there's the California Bioenergy
20 Association. There's the Renewable Natural Gas Coalition.
21 There's groups actively working on this, but it's -- it's a
22 real issue. And you know, I'm not in any way advocating for
23 the CEC to stop supporting production development. But there
24 is an issue with, you know, supplying that production to the
25 marketplace.

1 COMMITTEE MEMBER SMITH: So, Tim, this is Charles
2 Smith. So to follow up on that I think we -- we recognize
3 that a lot of our earlier biomethane production awards tended
4 to be tied to fleets that were also located -- collocated with
5 those production facilities. Is that -- is that still a --
6 maybe this is too specific of a question today. But is that
7 still something that we could search for and find or is it
8 getting to the point, do you think, where the bigger issue
9 needs to be addressed of pipeline injection.

10 COMMITTEE MEMBER CARMICHAEL: So this is not my
11 full-time focus but it's an issue that I'm regularly, you
12 know, engaging on. My understanding is there's three
13 different types of projects in California right now. There's
14 the one that you just described, small, whatever the waste
15 stream is there's an opportunity with a captive fleet and some
16 power generation at a single site, really no movement of gas
17 whatsoever. You're moving the waste stream to that location
18 but you're not moving gas.

19 The second scenario is there's attempts to combine
20 multiple facilities, multiple waste stream facilities to a
21 single production center and then move that gas maybe to a
22 fleet refueling location or to power production, but there's a
23 gas movement component of that that is a challenge. And
24 there's also the challenge of finding the concentration of
25 meaningful waste sources.

1 And then the third one is I think where we really
2 want to get to is the larger scale production and supply
3 projects. And whether that's a municipal waste water or some
4 other significant waste stream, that's the project that I'm
5 really talking about where, you know, larger scale, if you
6 really want the economics to work you need to have pipeline
7 access. And you know, whether you're sending that to a power
8 plant or to a transportation, you know, user that's -- that's,
9 I think, where we need to go if we're going to realize that
10 whatever the number is, 2 billion gallons equivalence of in-
11 state production, we can -- we can have -- you know, continue
12 to support the smaller projects, but we're never going to get
13 to the 2 billion number if we don't have, you know, more
14 support for some of these bigger projects.

15 COMMITTEE MEMBER SMITH: So then following on that,
16 so once we get to the point where we -- where we do have the
17 large projects that can go into the pipeline is there going to
18 be a system or mechanism in place to where we can more -- to
19 where we can tie perhaps our biomethane production
20 specifically to transportation? You know, at the risk of
21 sounding myopic, our program is focused on transportation.
22 And so if -- if the biomethane gets produced that's -- that's
23 great. Every molecule of biomethane displaces a molecule of
24 natural gas, regardless of what sector it flows into.

25 But then once it is sort of eligible for power plant

1 use or natural gas use is there sort of a credit tracking
2 system that -- that we could rely on to help us get a sense
3 for what's benefitting the transportation sector versus the
4 power supply sector?

5 COMMITTEE MEMBER CARMICHAEL: So we're still trying
6 to figure this out. We've actually started a conversation, or
7 I should say the Air Resources Board started a conversation
8 with us about this in the context of vehicle incentives and is
9 there a way to tie that to a renewable natural gas contract or
10 usage requirement. And I think the short answer is it's
11 tricky and it depends who you talk to as so what sort of
12 response you're going to get.

13 Clean Energy, for example, one of my member
14 companies, will say, absolutely, we can do that. We can show
15 you the paper trail of your natural gas -- your renewable
16 natural gas to a station or to a specific user. UPS who is
17 another member of mine who obviously is very committed to
18 alternative fuels have said that they have not yet been able
19 to come up with a workable mechanism for, you know,
20 demonstrating, you know, X amount of renewable gas use at one
21 of their facilities.

22 So we're still trying to figure out how to do that.
23 I believe we will figure out a way, but I think the best way
24 to characterize that is that conversation is ongoing.

25 COMMITTEE MEMBER SMITH: Okay. Thank you.

1 COMMITTEE MEMBER MCKINNEY: Great. Thank you, Tim.

2 Any more comments from present Committee Members?

3 Bonnie Holmes-Gen.

4 COMMITTEE MEMBER HOLMES-GEN: Hi. I'm told I'm not
5 speaking into the microphone enough, so I'll try harder.

6 So I wanted to comment on behalf of the American
7 Lung Association in California that a key focus in our -- in
8 our reading and evaluation of this report and our steps
9 forward is always to look at how we are going to get the
10 cleanest fuels, as well as the lowest carbon fuels. And I
11 appreciate that you lay out in the report all of the -- the
12 key state goals, including our clean air goals. And I think
13 both Jim and Commissioner Scott have talked about the dramatic
14 reductions we need in criteria pollutants to meet our federal
15 ozone standards and federal (inaudible) standards. And we
16 have tremendous challenges ahead of us.

17 So in this area, as well as in the other areas,
18 we're always looking at how can we -- how can we promote the
19 fuels that are coming from the cleanest feedstocks, and that's
20 always a challenge that we face. And so especially, as
21 we're -- as we're talking about biofuels I just wanted to
22 raise our -- our recommendation that we continue to take
23 steps. And I know there are a lot of complicated challenges,
24 as we've just referred to, but to -- to step up the focus on
25 waste-based and clean renewable feedstocks. And I

1 understand -- I appreciate that it's certainly referenced in
2 the report that many of the dollars are going to waste-based
3 feedstocks. I'd love to have more detail, if I've missed it,
4 in how much of that funding is going to those and just
5 encourage additional steps to make that a bigger priority.
6 And maybe part of that is, as you've been talking about,
7 looking at ways to deal with some of the challenges that
8 currently exist to using higher quantities of those as opposed
9 to conventional biofuels. And I think cellulosic, waste-
10 based, other renewable feedstocks would be on our priority
11 list.

12 COMMITTEE MEMBER MCKINNEY: Great. Thank you.
13 Yeah, I think just as a friendly reminder, our portfolio of
14 investments in biofuels really does focus on waste-based
15 feedstocks, and the carbon intensity numbers for those are
16 quite low. So several carbon -- negative carbon intensity
17 pathways were different types of biogas. And then very low
18 carbon values in the 10 to 15 grams per megajoule for
19 biodiesels and renewable diesels from waste-based feedstock.
20 So we're -- we're pleased with that and with the industry
21 technology developments there.

22 Any comments from any other Committee Members at the
23 table?

24 Jacob, do we have Committee Members on the phone who
25 wanted to comment on this?

1 MR. ORENBURG: No one has their hand up.

2 COMMITTEE MEMBER MCKINNEY: Are there any Committee
3 Members on the phone that would like to comment on the
4 biofuels funding allocation?

5 COMMITTEE MEMBER SHEARS: Sorry. John Shears. I
6 might have been muted. Can people hear me now?

7 COMMITTEE MEMBER MCKINNEY: Yeah. Go ahead, John.

8 COMMITTEE MEMBER SHEARS: Yeah. I just, again, just
9 want to commend them for all of the great work that they're
10 doing on this development and evolution of the Investment
11 Plan. And I want to commend them for all of their extensive
12 outreach and hard work with all of the other agencies and
13 the -- and the broader stakeholder community. I know the
14 staff has put a lot of effort into, you know, making sure that
15 this Investment Plan really, really syncs up and tracks what's
16 happening elsewhere in the state. And again, you know, as
17 I've said with previous investment plans, you know, they've
18 done a fine job of managing a program that includes everything
19 along with the kitchen sink. So I just want to commend the
20 staff again on a great job.

21 COMMITTEE MEMBER MCKINNEY: Great. Thank you, John.

22 Are there other Committee Members on the phone that
23 would like to comment? Okay.

24 I think we'd like to turn to public comments in the
25 room. And let's see, Charles, do you have blue cards or

1 who's -- who's got blue cards?

2 COMMITTEE MEMBER SMITH: Okay. So we have a comment
3 from Mike Lewis with Pearson Fuels.

4 MR. LEWIS: You want me to come to the microphone
5 or --

6 COMMITTEE MEMBER SMITH: Yeah.

7 COMMITTEE MEMBER MCKINNEY: Yeah. If you could come
8 to the podium microphone, please, and identify yourself.

9 COMMITTEE MEMBER SMITH: Yeah. Either -- either at
10 the podium or at the chair, whichever you're comfortable with.

11 MR. LEWIS: Preaching. So these are comments about
12 the biofuel production and supply only; right?

13 COMMITTEE MEMBER MCKINNEY: Correct. Yeah.

14 MR. LEWIS: So the only thing that I would point is
15 we do a lot of ethanol sales and a lot of E85 flex fuel sales
16 around the state. And I wanted to commend you guys for the
17 previous support to the industry, to biofuels and e85 and
18 ethanol infrastructure and production.

19 On this category I would just ask you to consider
20 the title biofuel production and supply. So obviously the
21 emphasis, I know, is on biofuel production. And I think as
22 Joe mentioned with biodiesel there's the capacity to -- the
23 ability to increase the capacity of biodiesel pretty
24 substantially in the state. And I think that ethanol is a
25 little bit of a different animal. I think you have to keep in

1 mind that all the funding that you guys put out there makes a
2 project subject to prevailing wages. So I don't think it's
3 viable that it's going to build a new plant, build a new
4 ethanol plant, a substantial ethanol plant, that's really
5 going to impact the ethanol production substantially.

6 So according to your records or notes from the
7 staff, 78 percent of the ethanol supply in California is
8 imported from out of state or out of country. And I would
9 just say don't ignore that. I mean, don't ignore that
10 entirely. I mean, almost all of that is controlled by -- into
11 five big unit-train facilities in the State of California that
12 are run by the oil companies. I mean, there's -- Valero has
13 got one, Shell has got one. There's some massive ones up in
14 the Bay Areas. So that's where that ethanol is coming in.
15 And so there are some producers of lower CI ethanol in the
16 Midwest that don't have unit-train capacity.

17 So my point is that in that category I would just
18 ask you to consider that it's biofuel production and supply,
19 and supply would include sub-unit train transload facilities,
20 in other words, places to offload railcars that are not at a
21 96 railcar capacity. Because otherwise you're basically
22 saying that the oil companies can have 78 percent of the
23 control of the market. And little guys that -- you know, it's
24 just very hard to compete against that without some kind of an
25 incentive. So consider that.

1 And then I do want to again point out, I do think
2 ethanol is different than biodiesel in that capacity. It
3 think biodiesel does have a lot of additional capacity that
4 can be built in the state. But ethanol can be clearer, I just
5 don't know if you're going to ever really build an extra plant
6 from these -- these funds. So I just wanted to point that
7 out.

8 COMMITTEE MEMBER MCKINNEY: All right. Thank you.

9 Charles, did we have any more in this category?

10 COMMITTEE MEMBER SMITH: Yes. I think Bill Bunnell,
11 I think there a couple of remarks referenced here. But one of
12 them at least relates to E85. So I figured this might be the
13 right opportunity.

14 MR. BUNNELL: Yeah. Well, on the E85, I'm going to
15 putting it into my station here in Fresno. I own a gas
16 station in Fresno. But prior to that I ran half of the ARCOs
17 in the State of California. And prior to that I was the fleet
18 sales manager for ARCO. And one of the things that the fleet
19 managers or the companies that -- you know, the PG&Es of the
20 world and pest control companies and so forth, one of the
21 things they want to see is a certain saturation. Because you
22 can have the ability to get biofuels. But if it takes your
23 driver an hour out of his way or 45 minutes out of his way to
24 get that then you've decreased their efficiency, which is the
25 primary thing that that fleet operator is targeted with.

1 And so I hope with some of these things where if you
2 guys are looking at those maps that you put up where you go,
3 okay, we got one in the City of Fresno, like for instance,
4 with E85 we do have one in Fresno, but it's at the far end of
5 Clovis which would be like going to the very edge of the
6 peninsula of San Francisco or Palos Verdes Peninsula in Los
7 Angeles or, you know, the very edge of the peninsula down in
8 San Diego. Nobody goes 45 minutes out of their way to get
9 biofuels and then go back on their way.

10 I think a city like Fresno with a million people
11 between Fresno and Clovis and surrounding areas probably with
12 like four or five strategically located positions you'd be
13 able to service everybody who wants to get ethanol. And the
14 same would hold true for the other biofuels that we were
15 talking about.

16 And that really was the only thing I had that was
17 apropos to -- to this. There was two other things I put down
18 there, but I can hit those later if you want.

19 COMMITTEE MEMBER SMITH: So the other comments
20 pertain to living wage proposals and their recent --

21 MR. BUNNELL: Okay. A lot of your speakers --

22 COMMITTEE MEMBER SMITH: -- diesel study.

23 MR. BUNNELL: -- a few of your -- you said it
24 yourself, and then I think one other Board Member said they'd
25 like to see more projects in the Central Valley.

1 I got involved, and I remember you from the very
2 beginning, and I remember you from the very beginning, and Tim
3 Olson who was here earlier, and my wife had some medical
4 issues so I kind of backed out of all this. But one of the
5 things that I faced when I was going to do this originally,
6 and the Energy Department liked my project because I'm write
7 where two freeways -- or actually now three freeways meet, and
8 they asked me how much money I wanted.

9 And I said, "Well, you never know with planning
10 commissions and that sort of thing." But I said, "If
11 everything goes perfect \$125,000. You know, they might ask
12 you to plant some trees and things that have nothing to do
13 with this specific project." But I said, "I feel very
14 confident, less than \$150,000. And certainly if they throw
15 everything and the kitchen sink at me, less than \$175,000."

16 And the Energy Department guy who was here at my
17 station and some private consultant that they had hired
18 said -- they looked at me. And I didn't know if that look
19 meant I was asking for too much money and being greedy using
20 the state's money in this way or I was naive and not asking
21 for enough.

22 And so I said, "You know, what's that look about?
23 What's that?"

24 And he said, "We haven't seen anybody do one of
25 these things for less than \$265,000 in three years. There's

1 no way you're going to do that."

2 And I said, "Look, I can put my brother-in-law in a
3 director's chair and pay him \$50,000 to watch these guys and I
4 still couldn't spend that kind of money."

5 And then he said to me, "Are you going to pay these
6 guys," I think he called it living wage or a working wage or
7 something like that.

8 And I go, "I don't know. What -- what does that
9 mean?"

10 And he said, "\$36.00 an hour."

11 And this is when the program first started and
12 everybody was out of -- Fresno still has double-digit
13 unemployment, but it was like 20 percent at that time. And I
14 go, "These guys are just happy to have work, you know?"

15 Like then the guy, he told me, he goes -- the
16 consultant, he said, "I don't care if a guy is fetching from
17 Starbucks, he better be getting \$36.00 an hour to do it."

18 And I thought, as you were talking about the need
19 for more money, I agree. But maybe if we were to -- you know,
20 in the Central Valley the average wage is nowhere near what it
21 is in San Francisco or L.A. or San Diego. You might be able
22 to get three times more projects done or at least 40 or 50
23 percent more projects done without putting one extra dime of
24 the state's money into it if you could make those reflective
25 of what the realities are of the cost of living in different

1 areas. And I know my -- my State Senator is Kristen Olsen.
2 And we had
3 talked about it. She was going to be trying to put a bill
4 across for -- for every project so the Central Valley could
5 get better represented and so forth.

6 But maybe at least in this aspect, if that could be
7 reflected and you could get a heck of a lot more done for your
8 money than what's being done now because of these rules that I
9 think are somewhat inflexible.

10

11 PRESIDING MEMBER SCOTT: So let's -- Charles, on
12 this, let's -- let's stay with the biofuels category. And so
13 we'll call you back up for the other ones, and then we'll --
14 we'll just keep with the -- with the category that we're
15 talking about.

16 COMMITTEE MEMBER SMITH: Yeah. Okay. Those are all
17 of the in-room blue cards that I have.

18 I have a blue card representing Russ Teall who is on
19 WebEx. Oh, no, you're here. Hello Russ.

20 MR. TEALL: And I didn't even take the train. Do
21 you want me to speak here or --

22 PRESIDING MEMBER SCOTT: At one of the microphones
23 so the folks on the phone can hear you.

24 MR. TEALL: My name is Russ Teall from Biodico. And
25 I'm also the President this year for the California Biodiesel

1 Alliance, and a grant recipient from the CEC for two separate
2 projects, one down at a naval base in Ventura County in Port
3 Hueneme where the Navy has decided to set a goal of a 50
4 percent reduction in fossil fuel use for energy and for fuel
5 by the year 2020 nationwide. So I think we can do it in
6 California by 2030. It gives us an extra ten years.

7 The nation's state, let's see, Jim was talking about
8 the nation's state. Well, we've got a state of states. So
9 what is the largest agricultural state in the United States?
10 Any guesses? California. What's the second largest state?
11 Fresno County. So this -- this county represents, if it were
12 a state, the second largest agricultural production in value
13 in the United States.

14 And so part of what I wanted to encourage you to do
15 is look at what are the feedstocks for biofuels? Because all
16 the biofuels depend on that and we've got a tremendous
17 resource in California. In Fresno County alone between Fresno
18 State, Westfield Community College, and the UC Davis
19 Agricultural Research Station there is a lot of resource going
20 on on different feedstocks that can be grown sustainably for
21 biofuels production. And I would encourage you to look at
22 projects in the biofuels area on an integrated basis. You
23 know -- you know, there are existing conventional feedstocks
24 and there are new and emerging feedstocks. And you know, to
25 the extent that we can encourage the development of new

1 feedstocks in California it's much better.

2 The low carbon fuel standard, as a trade association
3 we've looked at it as being a tremendous benefit. And it's --
4 it's drawing in a lot of biofuel from other states, other
5 countries, and in-state as well. And what we'd like to see
6 and what the CEC is doing is -- is encouraging in-state
7 production of those resources. So -- so, you know, if we've
8 got an economic wave of demand that's going to occur, why not
9 do it here in California and in the most disadvantaged
10 communities. So even though SB 535 doesn't actually apply to
11 funding under AB 118, you know, in spirit it should.

12 Do I have that wrong, Jim?

13 COMMITTEE MEMBER MCKINNEY: No.

14 MR. TEALL: I thought so. But it's -- the CEC has
15 been including that in the bonds that have gone out. And I
16 would encourage, you know, even more emphasis on that. And
17 it's not just Fresno County, it's the entire Central Valley.
18 There's areas in -- in Monterey and Watsonville and the
19 Imperial Valley, in Downtown L.A. So you know, taking 6,000
20 voting districts, you know, in California, the census tracks,
21 dividing them up into the CalEnviroScreen score, it's a real
22 checkerboard. So you know, every community, you know -- you
23 know, has areas in it that need development.

24 Finally, there's not enough money. That's the --
25 that's the bottom line. You know, \$100 million for doing this

1 task is -- is not enough money to -- to really make the kind
2 of change that we need to make, you know, in time. And so
3 we've gotten together a coalition of biofuels interests,
4 biogas, bioethanol, biodiesel, but it applies to all the
5 renewables. And we're -- we're asking for Greenhouse Gas
6 Reduction Fund monies to be dedicated to biofuel development
7 in California. Tim's part of the Coalition. Some of your
8 other members are, as well. We're coordinating with Eileen.
9 You know, she has a separate initiative, and we don't want
10 them to be seen as competitive at all. It's not a zero-sum
11 game. We're looking at new funding coming in, you know, under
12 Cap and Trade this year. And you know, the estimates range
13 from a total budget, up from \$800 million to, what, \$1.1 or
14 \$2.2 billion. And so, you know, our feeling is that -- that
15 since oil and gas have been brought under the cap, what more
16 appropriate thing to spend it on than replacements and
17 renewable replacements for oil and gas.

18 One final comment, as a grant recipient and
19 applicant I love the pre-proposals. They're -- it's a much,
20 much easier way than spending what ends up being a huge amount
21 of time and effort. And if you're off base it's better to
22 know early rather than later. Thank you.

23 COMMITTEE MEMBER MCKINNEY: Thanks, Russ.

24 Is that it, Charles, for blue cards?

25 COMMITTEE MEMBER SMITH: For -- for this category,

1 yes.

2 COMMITTEE MEMBER MCKINNEY: Great. Thank you.

3 And -- okay.

4 So with that let's move to electric charging
5 infrastructure. So the staff recommendation here is to
6 increase funding from last fiscal year by \$3 million to \$18
7 million. And this was also put forth in November.

8 So do we have any comments on this from Committee
9 Members in the room? We'll start with Erik White of the Air
10 Resources Board.

11 COMMITTEE MEMBER WHITE: Thanks, Jim. And you know,
12 we certainly want to express our support for the investment
13 that the Commission is proposing to make. It's important
14 towards implementing the Governor's action plan. It's
15 certainly important towards supporting our continued
16 investment for zero-emission vehicles for the CVRP program.

17 A couple areas that, though, we would suggest, maybe
18 some clarification happen. One certainly would be I think
19 along the lines of our earlier conversations about how you
20 plan to increase deployments in multi-unit housing. That's
21 very important. And I think having some specificity about how
22 we can improve on our -- on the successes, or maybe not as
23 successful as we would have liked to have been so far. And
24 also I think, you know, as we look at our investments in
25 disadvantaged communities, how the investments will benefit

1 other opportunities to increase deployments in disadvantaged
2 communities as well. We have a number of programs that we
3 will be implementing this year on the light-duty side, pilot
4 programs looking to expand the deployment of advanced
5 technology vehicles in the disadvantaged communities. So
6 opportunities to pair investments on charging infrastructure
7 along with those we think are important, not just for the
8 deployments we'll be doing this year but our expectation to
9 continue those investments next year and hopefully start to
10 build on those and expand those in the years moving forward.

11 COMMITTEE MEMBER MCKINNEY: Great. Thank you. I
12 think those are really important considerations. And we've
13 worked with you before, and we'll continue working with you on
14 that.

15 Bonnie Holmes-Gen?

16 COMMITTEE MEMBER HOLMES-GEN: Bonnie Holmes-Gen.

17 And I would just want to echo --

18 COMMITTEE MEMBER SMITH: Microphone.

19 COMMITTEE MEMBER HOLMES-GEN: Oops. Okay. I want
20 to echo Erik's comments for the sake of time. We support
21 the -- the funding, the increase in funding for the charging
22 infrastructure, as well as we support the hydrogen. Is that
23 next or we're not doing that? Are we doing hydrogen now too?

24 COMMITTEE MEMBER MCKINNEY: No. We're on electric
25 charging infrastructure.

1 COMMITTEE MEMBER HOLMES-GEN: Electric charging?

2 COMMITTEE MEMBER MCKINNEY: Yeah.

3 COMMITTEE MEMBER HOLMES-GEN: Okay. So --

4 COMMITTEE MEMBER WHITE: That's not the end of
5 comments. I'll talk again.

6 COMMITTEE MEMBER HOLMES-GEN: Okay. All right. So
7 I'll copy them again. No. But --

8 COMMITTEE MEMBER WHITE: You can go first.

9 COMMITTEE MEMBER HOLMES-GEN: I'll go first. I want
10 to support this category. I'm really looking forward to
11 seeing the information about how these new deployment - - new
12 EV charging deployments are going to affect the whole picture.
13 I think it's hard right now to have a full picture, except
14 certainly we know we need to increase multi-unit housing. But
15 in terms of what is needed around the state and
16 geographically, we really need that additional information
17 about how the PUC decision is going to roll out. So I'm
18 looking forward to getting more of that.

19 I wanted to underscore the need to -- for continued
20 strong coordination between ARB and CEC. I know that's
21 happening in terms of making sure that the funds that are
22 under both agencies' control are used to maximize benefits,
23 especially to disadvantaged communities. And hoping, again,
24 that there can be increased projects located in the San
25 Joaquin Valley, and looking for more opportunities to -- to

1 find and to fund good projects that we can showcase in
2 showing -- to show local governments in the valley and other
3 places how important and effective these strategies can be.

4 I'm really pleased to be here in the San Joaquin
5 Valley Air District and appreciated the presentation. I hope
6 this also shows that there's renewed coordination between the
7 CEC and the San Joaquin Valley Air District. That's really
8 important in this EV deployment, both vehicles and
9 infrastructure. And I think a strong partnership working
10 together is really critical to deploy the most effective
11 network of electric vehicle infrastructure and to -- just to
12 work with local governments to make this really happen in the
13 valley. So I'm glad you're having this meeting here. And I
14 know there needs to be additional work between the agencies to
15 figure out how to best roll it out.

16 Can I just say really quickly that --

17 COMMITTEE MEMBER MCKINNEY: Please do.

18 COMMITTEE MEMBER HOLMES-GEN: Please do. At some
19 point when there -- if there's discussion of the -- the EV
20 readiness projects, I know that's not funded currently, but I
21 wanted to add my support to increase the -- to add at least a
22 \$3 or \$4 million investment for that project also.

23 COMMITTEE MEMBER MCKINNEY: Yeah. And we'll make --
24 because you need to leave at 2:30 you said?

25 COMMITTEE MEMBER HOLMES-GEN: 2:45.

1 COMMITTEE MEMBER MCKINNEY: 2:45.

2 COMMITTEE MEMBER HOLMES-GEN: Yeah.

3 COMMITTEE MEMBER MCKINNEY: Okay. So we'll be sure
4 that you and Mr. Carmichael get an opportunity to make any
5 comments that we haven't gotten to yet.

6 Any other comments from Committee Members present?
7 Let's go to Committee Members on the phone. Is there anybody
8 who wants to comment on this funding category?

9 COMMITTEE MEMBER SMITH: We did receive earlier that
10 request to comment from -- oh, you asked for Advisory
11 Committee members first?

12 COMMITTEE MEMBER MCKINNEY: Uh-huh.

13 COMMITTEE MEMBER SMITH: Sorry.

14 COMMITTEE MEMBER MCKINNEY: Yeah, on the phone.

15 COMMITTEE MEMBER SMITH: Anything?

16 COMMITTEE MEMBER MCKINNEY: Flawless team work.

17 COMMITTEE MEMBER SMITH: I know; right?

18 COMMITTEE MEMBER SHEARS: Yeah. Just -- John
19 Shears. And I also want to just echo the fact that the Energy
20 Commission is -- is holding Advisory Committee hearings,
21 moving them around the state so that local delegations and
22 stakeholders can more easily participate in the hearings. And
23 just look forward to working together with the Energy
24 Commission and the other agencies on enhancing the deployment
25 of advanced technologies in the challenged communities that

1 we're all trying to help get ahead. Thanks.

2 COMMITTEE MEMBER MCKINNEY: Jacob, was there anybody
3 else on the phone for Committee Members?

4 COMMITTEE MEMBER CARMICHAEL: I'll speak -- I'll
5 speak for Eileen.

6 COMMITTEE MEMBER MCKINNEY: Who's that? Is that
7 Eileen?

8 COMMITTEE MEMBER TUTT: Can you hear me? Or I guess
9 Tim can speak for me.

10 COMMITTEE MEMBER MCKINNEY: No, we can hear you.
11 Please proceed.

12 COMMITTEE MEMBER TUTT: So I just -- I just wanted
13 to say, yes, we definitely support the \$18 million this year.
14 We really appreciate the staff recognizing the need for
15 infrastructure is probably the second biggest barrier to this
16 market. The first biggest barrier is the up-front cost of
17 these vehicles, of course. And so I noted that this -- this
18 plan does not continue the light-duty. And in the old version
19 it calls it the electric vehicle deployment, but really it's
20 light-duty Clean Vehicle Rebate money is not necessarily
21 electric, unless you call a fuel cell also electric.

22 But I wanted to -- Jim or Commissioner Scott, is
23 there going to be an opportunity to suggest perhaps -- maybe
24 I'm taking it -- that we are so underfunded in that program,
25 given the current budget, CARB, the Air Board, Erik White can

1 attest to this. And we all know there's not nearly enough
2 money in the Clean Diesel Rebate Program. So just would
3 suggest that \$18 million is great for infrastructure. Just
4 wondering why we are not continuing to also fund the Clean
5 Vehicle Rebate Program?

6 PRESIDING MEMBER SCOTT: Eileen, this is -- this is
7 Commissioner Scott. You know, I think one of the
8 considerations that we made at the Energy Commission on this
9 is that we were putting about \$5 million extra into the CVRP
10 at a time when the CVRP was funded around \$20 million, \$30
11 million. The CVRP has \$120 million right now. And so we
12 wanted to kind of take some of that money and put it back into
13 the other categories that we have that are also traditionally
14 underfunded. And so that was kind of a balance we made now
15 that the Greenhouse Gas Reduction funds are going into the --
16 into the CVRP program.

17 COMMITTEE MEMBER TUTT: Okay. I guess then my only
18 request is that the Greenhouse Gas Reduction funds that were
19 allocated this year are not sufficient to fund not just the
20 CVRP, but also the very important environmental justice
21 programs, as well as the heavy-duty vehicle pilot and demo
22 programs and the -- and the HVIP programs. So we're pretty --
23 we're -- we know that we're quite short. CARB staff pretty
24 much agrees with that. So maybe -- maybe we could ask that
25 the Energy Commission help to support the -- or at least

1 recognize, s CARB staff has done, the need for more -- more
2 funding there too. They are -- the programs are very
3 substantially underfunded right now. So just wanted to put
4 that bug in your ear. I know Erik is very, very aware of
5 how -- how short we are, not just in the clean vehicle rebate
6 program, but like I said, in the other, almost even shorter in
7 the -- in the pilot and demo programs.

8 So that's all. I know it's not on the list, so I
9 just wanted to pitch. I understand entirely, Commissioner,
10 that makes a lot of sense. And I just would ask your support
11 and help as we try to make sure that the (inaudible) side of
12 this project is adequately funding -- funded if we aren't
13 going to be using this money anymore.

14 PRESIDING MEMBER SCOTT: Uh-huh. Yeah. Duly noted.
15 And I will also note that all of -- all of the things that we
16 are funding are also critically underfunded as well. And so
17 it's -- it's a tough balance. We're super lucky in the state
18 because we have all of these pots of money that we can -- can
19 draw from. But again, the need is great. The transformation
20 we're trying to make is so large that all of our programs are
21 oversubscribed. But that's duly noted. I take your point.

22 COMMITTEE MEMBER MCKINNEY: Jacob, were there any
23 other Committee Members on the phone?

24 MR. ORENBERG: No one is requesting any comments.

25 COMMITTEE MEMBER MCKINNEY: Okay. Let's turn to

1 blue cards here.

2 COMMITTEE MEMBER SMITH: So I have a blue card for
3 someone on WebEx, Dr. Thomas Green. I think we tried to reach
4 for comment earlier but didn't get through. I wonder if he's
5 available now?

6 DR. GREEN: Yes, I'm here.

7 COMMITTEE MEMBER SMITH: Hi. Please go ahead.

8 DR. GREEN: Okay. First, I'd just like to say that
9 I am a private citizen, a resident of Redwood City. And I've
10 got a personal interest in low carbon transportation options
11 and efficient vehicles. I'd like to commend the Energy
12 Commission and the Board for these investments. And thank you
13 for the opportunity to comment and participate in today's
14 meeting.

15 So my comment is that although you are -- it's clear
16 you're investing quite substantially into electric vehicle
17 infrastructure, I'm concerned about what seems to be a very
18 paltry deployment of long distance charging facilities. From
19 reading the update report, it's really an excellent report, I
20 saw that there have only been nine DC fast chargers installed,
21 and that's a pretty small investment so far.

22 And then from today's presentation and Mr.
23 McKinney's update, so only about three public DC fast chargers
24 outside of metro areas now. And there are 120,000 electric
25 vehicles in California, as you noted. And you showed a chart

1 showing exponential growth. And I think your own chart shows
2 that EVs will dominate among, you know, ZEV vehicles over the
3 next 20 years or so.

4 The I guess a previous commenter, Eileen mentioned
5 that cost is a big impediment to adoption, but also is -- but
6 also range (inaudible) as you probably know the people
7 mentioned. And people are very concerned about how far you
8 can drive these. And it looks like your investments in the
9 metro areas right now are good. And also there's been a lot
10 of private investment so that I think people are realizing
11 that electric vehicles are now practical for local travel.
12 But as you all know, and a lot of you folks probably drove to
13 this meeting over long distances, that Californians like to
14 drive long distances. And we need some sort of network along
15 transportation corridors for -- to really enable a new phase
16 of electric vehicle travel. And also I think that would
17 really aid adoption, as well, once people realize that going
18 long distances is more practical. I think that's also
19 probably a big issue for people in the valley. There are
20 relatively long distances between the towns.

21 So as an action I'd like to encourage the Energy
22 Commission to show some leadership by investing in an
23 effective network of DC fast chargers along our transportation
24 corridors, just like our neighbors in Oregon and Washington
25 have. I know I've seen, I guess you do have some planned ones

1 along I-5 and 99, and I think that's -- that good. But it's
2 really -- those alone are just a really insufficient network
3 to enable long distance travel.

4 And I'm also a little concerned that maybe your
5 focus on regional plans could have caused some sort of
6 oversight, and by that I mean neglect, of inter-region travel.
7 And I'm just sort of wondering if you could reflect on that a
8 bit. And being able to connect the different regions is
9 probably, you know, the next step and a very important thing,
10 and not just deployment within regions.

11 So in addition to the ones you have planned for I-5
12 and 99, I would encourage you to include -- to think about
13 deploying ones on Highway 101 between Santa Barbara and San
14 Jose. I think just a few there would extend the network that
15 starts in San Diego and goes all the way east of Sacramento.
16 And there's just a gap there of about 300 miles now that maybe
17 something like six chargers would -- would sample well.

18 And you know, if we had a network of something, a
19 total of about 100 of these fast chargers, that would, I
20 think, work on several transportation corridors, would --
21 could allow us to extend up to the Oregon border on 101 and I-
22 5, connect to the West Coast Electric Highway. And from
23 reading your own documents it looks like a network of 100 of
24 these chargers would only cost about the same as 1 hydrogen
25 fueling station by the average cost.

1 So just as somebody that's interested in moving --
2 helping move our state forward in low carbon emission, you
3 know, end-to-end vehicles it seems like this could be a really
4 worthwhile investment. And I encourage you to consider
5 something like this. Thank you.

6 COMMITTEE MEMBER MCKINNEY: Thank you very much,
7 Doctor -- excuse me -- Dr. Green, for your -- your thoughtful
8 comments. And it's clear you've put a lot of thought and
9 research into this.

10 A couple of things. So I think the prevailing
11 theory in how you -- you start growing these ZEV vehicle
12 markets is that you do really need to start with kind of
13 regionally-based networks, whether it's hydrogen fueling
14 infrastructure or electric charging infrastructure. And once
15 you have reached a certain saturation point, then you can
16 start to connect the regions. And that's where we are for
17 market development for EVSC or electric vehicle charging
18 infrastructure.

19 So we very much appreciate your -- your calls for
20 more of a fast charger network. We are, in fact, working on
21 these. And we've provided testimony to the Air Resources
22 Board in conjunction with some of the other states that are
23 part of the Eight State Coalition, so we are -- we are working
24 on those plans. They tend to be more expensive. We're not
25 quite sure of the use levels yet, so there's a bit of a risk

1 on the public sector investment. But again, it's noted. And
2 I think as these markets mature and we get more thoughtful
3 people like yourselves that are interested in driving further
4 that we'll see more action in this regard.

5 DR. GREEN: Thank you.

6 PRESIDING MEMBER SCOTT: I'll just add, also, that
7 we had a workshop about two weeks ago and had a whole bunch of
8 people, and we spent the entire day talking in detail about a
9 lot of the issues that you've raised. And so it is something
10 we're very mindful of and aware of. And I don't know the link
11 off the top of my head, but I think if you go on to the Energy
12 Commission webpage and go under the transportation tab you
13 might be able to find that workshop. And all of the
14 presentations and things like that from the workshop are
15 posted, so that could give you some more information into some
16 of the things the Commission is working on.

17 DR. GREEN: Thank you.

18 PRESIDING MEMBER SCOTT: You're welcome.

19 DR. GREEN: I'll look for that.

20 PRESIDING MEMBER SCOTT: Thank you.

21 Anyone else on blue cards, Charles? Okay. Next.

22 COMMITTEE MEMBER MCKINNEY: Okay. We'll now turn to
23 hydrogen fueling infrastructure. This is not a Staff
24 recommendation. This is a legislative requirement that Staff
25 allocate up to \$20 million for hydrogen fueling

1 infrastructure.

2 So Bonnie Holmes-Gen here at the Committee.

3 COMMITTEE MEMBER HOLMES-GEN: Thanks. I want to,
4 okay, turn on the mike.

5 I wanted to express my support for this -- for this
6 recommendation, the \$20 million. I realize it's a legislative
7 recommendation, but we think it is critical to move forward
8 with this. And I want to remind everyone that it's a critical
9 part of our air quality strategy, in addition to the
10 greenhouse gas reduction goals. And we just testified earlier
11 this month on a proposal to strengthen our federal ozone
12 standard. That's another big issue that's coming down. We
13 realize that we are not -- that our current standards are not
14 health protective enough. So we're going to need to continue
15 to do more and do faster work to get -- to clean up our fuels,
16 not just for greenhouse gasses but by 2032 we're going to need
17 to see clean air that meets federal ozone standards in the
18 South Coast Air Basin, and potentially even stronger
19 standards.

20 So -- so this is -- so getting quick introduction of
21 fuel cell vehicles and stations is a key part of the strategy.

22 And I wanted to ask if you could comment, knowing that this
23 strategy, as you said, is based on getting regionally-based
24 networks, both for electric vehicles and fuel cell vehicles.
25 Looking at the San Joaquin Valley it's not -- it's not on

1 the -- in the network now in terms of where hydrogen stations
2 are going to be located. When do you think that hydrogen
3 stations will be coming to the valley? When do you think that
4 might be built out?

5 COMMITTEE MEMBER MCKINNEY: That's -- that's a good
6 question. So we do have our first connector station that will
7 be built in Coalinga by First Element. And that's supposed to
8 come online late this year or first quarter of next year.
9 That's -- that's a major achievement for connectivity.

10 And beyond that, you know, the automakers all run
11 their own surveys of their potential customer bases, what they
12 call hand-raiser data. And at some point they will signal to
13 the funding agencies that there's a big enough critical mass
14 to justify a station, and that could be, you know, Stockton,
15 Fresno, Bakersfield, Merced, we don't know. We haven't had
16 that testimony yet. That hasn't come into our solicitations.
17 But that would be the trigger, I think, for us to really
18 seriously evaluate a funding proposal.

19 I don't believe -- I'm kind of looking to Charles
20 and others about the last solicitation. I don't believe we
21 got any funding requests for stations in any of the major
22 valley cities. I don't think, yeah.

23 PRESIDING MEMBER SCOTT: Yeah. I think just
24 Coalinga.

25 COMMITTEE MEMBER MCKINNEY: Coalinga was the one.

1 So that's -- I think that's a great question. I
2 think that's a good question to pose back to the automakers.
3 And I think over time the ARB survey, the confidential survey
4 might start to reveal some of that -- that data, as well,
5 geographically.

6 I guess another thing I would add is that -- this is
7 in the Staff perspective -- I think an early market
8 opportunity with hydrogen fuel cells would be in the trucking
9 sector or the transit bus sector, and especially tiering off
10 existing hydrogen stations that are serving warehousing and
11 the forklifts that operate inside the big distribution
12 warehouses, there's a lot of that in the valley. And I think
13 other parts of ARB staff, actually (inaudible), have talked
14 about the potential for that in the Southern San Joaquin
15 Valley in Bakersfield in some of their warehousing districts
16 in that area. So we'll see what emerges with the ARB
17 solicitation.

18 Mr. White?

19 COMMITTEE MEMBER WHITE: So that's -- that's a good
20 comment, Jim.

21 First, I just want to express our strong support for
22 this. This is another critical year of investment in hydrogen
23 infrastructure. You know, one of the things that we do want
24 to make sure that, as -- as a Commission, is -- is going
25 through the station selection process with a mindful eye of

1 what's needed in the future. You know, it's -- right now it
2 is -- it is a very new and nascent market. We expect it to
3 grow and grow quickly. And we make sure that as we are siting
4 and sizing the stations that they are going to meet the
5 future -- the future market demands that -- that we're going
6 to see. So that's -- that's certainly an important
7 consideration for us looking at this moving forward.

8 On the heavy-duty side that's an interesting
9 question because I think that it is -- it will be important
10 and will be important for us to sit down and discuss how, as
11 we see hydrogen and electricity moving into heavier market
12 segments in the transportation sector, what role in the
13 investments we're making, and the light-duty sector can -- can
14 play into that. Hydrogen certainly is an important
15 consideration as we think about infrastructure needs there and
16 how they fit in with the investments that are being made on
17 the light-duty side, how can we either leverage those, which I
18 think may be challenging, but ideally are there opportunities
19 for siting nearby or other things that might help improve some
20 of the economics around hydrogen as a fuel cell?

21 I'll look forward to having those -- those
22 conversations as we move forward in some of the demonstration
23 projects and pilot projects that we have, especially in the
24 freight sector, move towards early deployment in the not too
25 distance future. And transit is a good example. I think

1 there's a strong partnership as was shown with the work that
2 we -- both agencies have done with AC transit. And as we look
3 at our transit strategy in advancing transit I think there's
4 going to be lots of opportunities to discuss how to use and
5 site hydrogen in conjunction with significant reductions from
6 that sector. So I look forward to that conversation.

7 COMMITTEE MEMBER MCKINNEY: Great. Thank you, Erik.

8 Tim Carmichael?

9 COMMITTEE MEMBER CARMICHAEL: Tim Carmichael of the
10 California Natural Gas Vehicle Coalition.

11 In the light of using or seeing the Investment Plan
12 as an education tool I think the section on hydrogen would be
13 strengthened with the addition of a paragraph talking about
14 renewable hydrogen. There's mentions of it but there's
15 discussion of where it comes from. And obviously there's a
16 connection to my world in that renewable natural gas is a
17 significant feedstock for renewable hydrogen, but it's not the
18 only avenue. And I just -- I think some people who read this
19 report know very little about alternative fuels and where they
20 come from, and they hear the term but they don't have the
21 background that people around this table do. So I would just
22 suggest the addition of a paragraph that covers that.

23 As I've noted before, I was fortunate to be part of
24 the conversations that led to the -- the lock-in of \$20
25 million a year for hydrogen for a period of time. Part of

1 those discussions were heavily weighted by the projections on
2 how many vehicles were going to be on the road. And I know
3 we're behind those projections. There's definitely promising,
4 you know, news announcements recently about what's coming.
5 But I just -- I'm going to keep reminding the Energy
6 Commission staff to monitor this closely because that \$20
7 million a year was, you know, committed to with an
8 understanding that there was going to be X number of vehicles
9 coming to market. And at some point if that doesn't come to
10 pass then it's going to be appropriate, in my opinion, to
11 adjust that \$20 million a year. And it's something that Staff
12 just needs to keep monitoring.

13 COMMITTEE MEMBER MCKINNEY: Yeah. Thanks, Jim, for
14 that reminder. And I think the first formal opportunity for
15 the Commission to do that will be under AB 8. So after the
16 publication of the ARB AB 8 report in June the Commission and
17 ARB will then prepare a joint report by December of 2015 that
18 looks at that question directly. So thanks for the reminder.

19 Other Committee comments here at the table?

20 COMMITTEE MEMBER HOLMES-GEN: Just I wonder if, in
21 response to the earlier discussion, if you could include more
22 information, not just on renewable hydrogen, that was a good
23 point, but on the opportunities, maybe I'm missing it in here,
24 for deploying hydrogen in the valley and other impacted areas
25 in the -- the bus and truck and freight sector?

1 COMMITTEE MEMBER MCKINNEY: Yeah. And I think to go
2 back to what Erik was saying from the Air Board, I mean,
3 there's -- there are some really exciting technologies that
4 are emerging. And I mean, we need to push down cost and get
5 more demonstration vehicles out on the road. But I think
6 there's a lot of -- a lot of opportunity there. And that's
7 one of the great things about fuel cell electric technology is
8 that they are so readily scalable, you know, all the way up
9 through big transit busses and Class 8 tractors. So -- so we
10 also look forward to that.

11 Let's see, I'd like to -- any other comments from
12 Committee Members here? I'd like to go to Committee Members
13 on the phone.

14 MR. ORENBERG: We have Tyson Eckerle.

15 COMMITTEE MEMBER SHEARS: Yeah. This is John
16 Shears. And I also --

17 COMMITTEE MEMBER MCKINNEY: Okay. We'll take John,
18 and then Tyson Eckerle.

19 COMMITTEE MEMBER SHEARS: So can you hear me?

20 COMMITTEE MEMBER MCKINNEY: Yes, we can. Please,
21 yeah, go ahead, John.

22 COMMITTEE MEMBER SHEARS: Yeah. So just want to
23 also speak in support of the -- the \$20 million.

24 And to follow on Tim's observations, I'm just
25 wondering, too, you know, as we're looking to the Governor's

1 2030 and really, you know, they're -- we're going to be
2 talking about 2050 goals in the context of the 2030 goals.
3 And Senator de Leon has actually indicated -- I should say
4 President Pro Tem de Leon has even indicated that he's
5 considering having 2050 goals set in legislation that he's
6 going to be championing, that the extended role of hydrogen,
7 it would be good to refer to the extended role that hydrogen
8 could play, not only in transportation and renewables, but
9 also in energy storage and grid integration so there's -- as
10 we move forward we're going to be talking more about the
11 systems and the greater and greater integration of the
12 systems, especially with the electrical grid.

13 And there's a lot of work going on right now, a lot
14 of thinking going into the role that hydrogen could play,
15 along with other forms of energy storage and transportation
16 too. So if that (inaudible) but I can follow up with -- with
17 you on that if you'd like. Pardon me, but I'm fighting --
18 fighting the -- this year's flu.

19 COMMITTEE MEMBER MCKINNEY: Yeah. Okay. Well, I
20 hope you feel better, John. Thank you for that comment.

21 Tyson Eckerle with the Governor's Office?

22 MR. ECKERLE: Yeah. Thanks, Jim. This is Tyson
23 with the Governor's Office of Business and Economic
24 Development.

25 And first of all, John, I hope you feel better very

1 soon.

2 And second of all, I wanted to express a strong
3 support in all three categories that you just talked about,
4 the hydrogen infrastructure --

5 COMMITTEE MEMBER MCKINNEY: Tyson, sorry to
6 interrupt. Could you speak up a little bit please?

7 MR. ECKERLE: Oh, I'm so sorry. Is that better?

8 COMMITTEE MEMBER MCKINNEY: There we go. Thank you.

9 MR. ECKERLE: Okay. Sorry. So, yeah, so I wanted
10 to express strong support for the -- all three categories that
11 we've just been discussing, you know, hydrogen, electric, and
12 biofuel production. I think it's a very well balanced plan
13 and it's -- the staff has done a tremendous job. It's not an
14 easy thing to balance all these demands.

15 I think on the hydrogen side, you know, my day job
16 is to help make sure that these stations are successful. And
17 the signal (phonetic), you know, what the Energy Commission is
18 going to do with the \$20 million is incredibly important to
19 the marketplace and -- and to the automakers in particular to
20 bring out those numbers of vehicles that we need to help
21 reinforce the program.

22 And then I just wanted to kind of step back from
23 that role and talk a little bit more broadly on the -- from
24 the GO-Biz perspective and how important we see this program
25 as this is really investing in the economy, you know,

1 California's future economy. And so we see a large part of
2 our role is helping to make sure that people who are applying
3 to this program can find success and can grow. And part of
4 that job is being able to tell the story and communicate, you
5 know, what -- how the market is expanding, what job creation
6 looks like both in a quantitative and qualitative manner.

7 So to the extent that the Energy Commission, I
8 think, has done a great job collecting the benefit, I think
9 the workforce and market growth, you know, to the extent we
10 can focus on that, we would love to work with you on that
11 directly.

12 Then also to the people in the room and the
13 applicants, we want to hear, you know, how this is changing
14 the way you can do business in California.

15 So thank you to everybody.

16 COMMITTEE MEMBER MCKINNEY: Okay. Thank you, Tyson.

17 Any other Committee Members on the phone want to
18 comment on this one?

19 MR. ORENBERG: No.

20 COMMITTEE MEMBER MCKINNEY: Okay. Thank you.

21 And with that, recognizing the time constraint for
22 two of our Committee Members here, we'd like to turn now to
23 natural gas, and we'll come back to public comments on
24 hydrogen later in the program.

25 But just looking at when you said you had to leave,

1 I'd like to say start with Tim on the -- and if you want to
2 speak to both natural gas categories, feel free.

3 COMMITTEE MEMBER CARMICHAEL: There are three of us.

4 COMMITTEE MEMBER MCKINNEY: Three? Okay.

5 COMMITTEE MEMBER HOLMES-GEN: No. No, four.

6 COMMITTEE MEMBER CARMICHAEL: Four.

7 COMMITTEE MEMBER MCKINNEY: Four? Okay.

8 COMMITTEE MEMBER HOLMES-GEN: Okay.

9 COMMITTEE MEMBER MCKINNEY: Okay. Reedy, set, go.

10 COMMITTEE MEMBER CARMICHAEL: Okay. So I'm going to
11 jump in. I actually have, if I can, I have comments on the
12 next three categories, and I'll keep it brief but I'll just
13 run through them.

14 COMMITTEE MEMBER MCKINNEY: Okay.

15 COMMITTEE MEMBER CARMICHAEL: So in general, very
16 supportive of this -- Staff's work, the plan. I think this is
17 really I'm for California for all the reasons people have
18 shared today.

19 On the natural gas fueling infrastructure, my
20 members continue to believe you, as an agency, will get more
21 bang for your buck by investing in vehicle incentives. And
22 that is almost to the company in, you know, a 26-company
23 organization. So there's a strong belief that there's
24 where -- and I know, you know, I've read your -- your report,
25 I've read the NREL analysis, I'm sharing the perspective of

1 our industry members.

2 That said, if you, you know, ultimately decide that
3 you're going to maintain the \$5 million, I appreciate the
4 categories that you have already included in prioritizing --
5 as priorities in that -- for that. But I also want to remind
6 you of another important segment, and that's these multi-fleet
7 opportunities that occasionally come up where there's no
8 station in the area. No fleet wants to take on the refueling
9 infrastructure by themselves. They really want to try, you
10 know, three to five trucks, something like that. There are
11 some portable options. They're not easy or not as easy as
12 they could be maybe. And I just want to suggest that that be
13 another category that eligible for this \$5 million
14 infrastructure. It's a multi-fleet proposal for a single
15 station to service them. And I think there's -- there's need
16 for that in various parts of the state.

17 Jumping to natural gas vehicle incentives, thank you
18 is my only comment for maintaining this level of funding. We
19 continue to believe it's important. We have an ongoing
20 conversation with Staff and Commissioner Scott about some of
21 the funding eligibility underneath the vehicle incentives. We
22 talked about the -- the airport shuttle example. We've talked
23 about the level of funding on light-duty -- the level
24 incentive funding, per vehicle incentive funding for light-
25 duty vehicles at \$1,000. We're not seeing the impact that any

1 of us want to see. So there's a need to bump that up, we
2 believe.

3 And I don't have it in front of me, but there's one
4 or two other issues that we have communicated. And I'm hoping
5 that, whether it's addressed in the plan or not, we will be
6 addressing those in the next solicitation.

7 And then just reiterating my comments from the last
8 meeting, very supportive of technology demonstration and
9 scale-up. But looking at the list, looking at the balancing
10 act that we're all trying to strike here, I continue to
11 believe that shifting, you know, some of this money, maybe \$5
12 million, to either vehicle incentives or biofuel production
13 would be a more meaningful impactful investment. And again,
14 I'm very supportive of technology demonstration but think \$15
15 million in that category is a good number. Thank you.

16 There are some temporal errors in the -- in the
17 report where it was written, you know, in the fall when
18 certain things were happening or not happening. I'm going to
19 include those edits that I caught in my written comments.
20 Thank you very much.

21 COMMITTEE MEMBER MCKINNEY: All right. So were you
22 an English major in a former life then?

23 COMMITTEE MEMBER CARMICHAEL: I wish I was a better
24 writer, but I do enjoy editing.

25 COMMITTEE MEMBER MCKINNEY: Okay. Okay.

1 PRESIDING MEMBER SCOTT: Bonnie?

2 COMMITTEE MEMBER MCKINNEY: Yeah. Erik or Bonnie?

3 COMMITTEE MEMBER WHITE: I'll defer to Bonnie first.

4 COMMITTEE MEMBER HOLMES-GEN: I really was just
5 going to say that we are really supportive of the staff's work
6 on this plan. And you know, we'd like to see more money in
7 several categories, but that seems to be the story you're
8 hearing from everybody here. But we think it's a balanced
9 plan. We think -- as I said, I think last year I think
10 this -- each plan is building on the success of the previous
11 plan. And this plan I think is getting us closer to where we
12 need to be to get the investments and the deployment of
13 technologies to reach our air quality and our -- our
14 greenhouse gas, and now to move toward our 50 percent
15 petroleum reduction goal. We would love to see, and I know
16 this is still new, but more discussion of that 50 percent
17 petroleum reduction goal, and I'm sure that will be coming
18 because it's still new. I know we'll see more mentions of it
19 in this plan.

20 But as we go forward I see some wonderful
21 opportunities for cooperation and engagement between the ARB
22 and the CEC as we work out that strategy and building it into
23 this plan, as well as the scoping plan and many other plans.
24 But there does seem to be a lot of creative work that needs to
25 be done to figure out how we're going to step up the level of

1 deployment, even from what we're envisioning here, to reach
2 that 50 percent goal. So I'm really looking forward to the
3 additional work and creativity and all the -- the plans that
4 need to be made to get to that 50 percent goal.

5 But thank you for the work that you've done on the
6 plan. We're really pleased to be a part of this process.
7 Thank you for allowing us to continue as a member of this --
8 of this Committee. I think it's incredibly important. And
9 again, I really want to underscore the thanks, also, for
10 having this meeting in Fresno and having some discussion with
11 a more regional focus. Appreciate that.

12 COMMITTEE MEMBER WHITE: So I'll also keep my -- my
13 comments short. Certainly recognize and appreciate the
14 continued coordination for -- on the demonstration and the
15 pilot side, and especially the way in which we've been able
16 to, between the ARB and the Energy Commission, to coordinate
17 that in a way where we are all kind of moving everything
18 forward and to just say that we're not stepping all over each
19 other's toes in trying to do that. And so I think that's been
20 really well in effect.

21 At a meeting at the South Coast on their Clean Fuels
22 Program a couple of weeks ago it was evident that just the
23 benefits that the Energy Commission's investments are paying
24 off in terms of projects in and around the ports as it relates
25 to drayage trucks and other types of applications, just the --

1 the exciting news coming out where the demonstration of these
2 technologies is looking very promising to the point where I
3 think we hopefully in the not too distant future are doing
4 exactly what Bonnie is looking for, and that's how we're
5 deploying these vehicles and have moved beyond just
6 demonstrating and piloting them. So we look very much forward
7 to that and our continued partnership.

8 One thing I do want to mention, though, is the
9 workforce training and development. And I think as we have
10 learned through our deployment of advanced technologies,
11 cleaner combustion technologies, for instance, for many fleets
12 who aren't familiar with that technology what we find is
13 challenges in terms of integrating that into their fleet and
14 into their operations. And it's probably a part of our job
15 that we don't give enough thought to in terms of the
16 importance of that. And if to be successful in our
17 demonstration -- I mean our deployment strategies we're going
18 to have to have a well trained workforce out there to support
19 them, not just at dealers, not just on those who design it,
20 but those who have to maintain these vehicles within fleets.

21 So if there are opportunities, maybe not in this
22 year's plan but in future plans, to Tim's point of if you find
23 extra money we certainly believe that being able to bolster
24 that is going to be important, especially as we've moving from
25 technologies that are no longer combustion based and are

1 completely new and foreign to many of those in fleets. It's
2 just -- now is the time to start building that -- that
3 fundamental understanding of the technology so that when we
4 are ready to deploy there is a skilled workforce out there to
5 support those in the field. So --

6 COMMITTEE MEMBER CARMICHAEL: I just love finding
7 opportunities to agree with Erik's comments in public, and I
8 totally agree with that last section.

9 COMMITTEE MEMBER MCKINNEY: Yeah. So if I can
10 recognize Al Estrada. So he's the supervisor of the group
11 that's in charge of that. So I'm glad you're hearing this
12 directly, Al. And we've got a series of meetings that we're
13 setting up with local (inaudible) resource, yeah, you know, in
14 the valley and in Southern California. So, yeah, we're
15 working on that one. Okay. Okay.

16 COMMITTEE MEMBER WHITE: The mass exodus begins.

17 COMMITTEE MEMBER MCKINNEY: Okay. Great. Well --

18 PRESIDING MEMBER SCOTT: Thank you for spending your
19 day here with us, and have a safe train ride back up.

20 We will now turn to the Committee Members on the
21 phone who might have comments on natural gas.

22 MR. ORENBURG: Tyson and Eileen. I don't have
23 anybody else on this.

24 PRESIDING MEMBER SCOTT: Call on Tyson?

25 COMMITTEE MEMBER MCKINNEY: Yeah. Tyson -- Tyson,

1 and then Eileen, you said?

2 MR. ORENBERG: Yeah.

3 COMMITTEE MEMBER MCKINNEY: Let's go in that order.

4 MR. ECKERLE: Sorry. This is Tyson. I forgot to
5 un-raise my hand, but I'm supportive of the natural gas --

6 COMMITTEE MEMBER MCKINNEY: Okay.

7 MR. ECKERLE: -- as well.

8 COMMITTEE MEMBER MCKINNEY: Okay.

9 COMMITTEE MEMBER TUTT: So this is Eileen. I'm
10 sorry. I had my hand up on the earlier item.

11 COMMITTEE MEMBER MCKINNEY: Oh, okay.

12 COMMITTEE MEMBER TUTT: But I think it's actually
13 applicable to all three. It strikes me, Jim, you mentioned
14 the risk that we are taking or the Energy Commission is taking
15 with some of these investments, and you mentioned scalability.
16 And I think in all three cases I just want to point out that,
17 you know, this money is an investment in the future energy
18 system in our state, and so with it comes risk for all of
19 these technologies. It's not specific to any -- any
20 particular technology. And I think we are all here to support
21 you in taking these very calculated risks that we believe will
22 help transform our economy to a more diverse transmission-
23 fueled future.

24 So I don't want to -- I don't want to -- I want to
25 make sure that the Energy Commission staff and, you know,

1 certainly the Chair or the Commissioner know that we're behind
2 you. And you know, that's what we live for as an Advisory
3 Committee member is -- is we support these investments, and we
4 understand that there's a certain risk in all of them. And we
5 also believe, at least I'm sure we all agree that -- that the
6 scalability opportunities for all of these technologies are
7 tremendous. So this is just the -- the toe in the door. And
8 as the Commissioner pointed out, it's not nearly enough. But
9 in any case I just didn't want to -- I noticed that these
10 different kinds of comments were swirling around as if they
11 were applicable to a particular fuel. But I think they're
12 all -- there's all -- they're all a little bit risky. I think
13 Energy Commission staff has ensured that the risk is minimal
14 and the benefits are maximized. And they all have scalability
15 options that we very much hope will be realized as soon as
16 possible.

17 PRESIDING MEMBER SCOTT: Us too. Thank you so much
18 for your support, Eileen. We do very much appreciate it. And
19 you're right, it -- I think Bonnie said she was looking
20 forward to the additional work and creativity that we have
21 before us. And I, for one, am also pretty excited about that.

22 So other -- other comments on the phone from
23 Committee Members? No?

24 COMMITTEE MEMBER SHEARS: Yeah. This is --

25 PRESIDING MEMBER SCOTT: Oh.

1 COMMITTEE MEMBER SHEARS: -- John Shears. And you
2 know, I support the proposed funding levels for natural gas,
3 taking into account Mr. Carmichael's recommendations.

4 I would also just again highlight by elaborating a
5 little more on the potential future for -- for hydrogen in the
6 energy economy of California, that there's a role to play
7 together with -- with the natural gas system for -- for
8 hydrogen as we look to completely or nearly completely de-
9 carbonize the California economy.

10 COMMITTEE MEMBER MCKINNEY: Right. Thank you, John.
11 Any other Committee Members on the phone?

12 And I think Mr. Gershen here had a last comment from
13 the table.

14 COMMITTEE MEMBER GERSHEN: Just wanted to support
15 Tim Carmichael's recommendation that I think I heard for \$5
16 million going -- adding to the biofuel production and supply.

17 I thought that was a great, great suggestion. I'm very
18 supportive of that.

19 Thanks, Tim.

20 COMMITTEE MEMBER MCKINNEY: And there was a softball
21 pitch hit out of the park. All right, Joe.

22 COMMITTEE MEMBER GERSHEN: Yeah. I can't miss the
23 opportunity.

24 COMMITTEE MEMBER MCKINNEY: Okay. I think -- let's
25 see, we're on natural gas. Let's turn now to combined

1 category, medium- and heavy-duty advanced vehicle technology
2 demonstration and scale-up linked with manufacturing. So the
3 staff recommendation is \$20 million for this category.

4 Joe, any comments from the table?

5 COMMITTEE MEMBER GERSHEN: Again, I think Tim's idea
6 of taking \$5 million and putting it into biofuel production
7 makes tons of sense.

8 COMMITTEE MEMBER MCKINNEY: You really got me on
9 that one.

10 PRESIDING MEMBER SCOTT: Exactly.

11 COMMITTEE MEMBER GERSHEN: Thanks for the softball.

12 COMMITTEE MEMBER MCKINNEY: Two in a row.

13 COMMITTEE MEMBER GERSHEN: Two in a row.

14 COMMITTEE MEMBER MCKINNEY: Yeah. Committee Members
15 on the phone?

16 COMMITTEE MEMBER SHEARS: It gets my vote.

17 COMMITTEE MEMBER MCKINNEY: Sorry? What? Who was
18 that?

19 COMMITTEE MEMBER SHEARS: John Shears. Just voting
20 in support.

21 COMMITTEE MEMBER MCKINNEY: Thank you. Okay. Any
22 members present in the public who want to speak to this?

23 PRESIDING MEMBER SCOTT: Okay.

24 COMMITTEE MEMBER MCKINNEY: Yeah. Take your -- take
25 your -- yeah. You can stand or sit, your choice.

1 PRESIDING MEMBER SCOTT: Also, will you say your
2 name for the Court Reporter

3 MR. COATES: Sure. It's Michael Coates. Is that
4 on?

5 COMMITTEE MEMBER MCKINNEY: Yes.

6 MR. COATES: Michael Coates with Mightycomm
7 representing Volvo Trucks here. And I just wanted to
8 reinforce that in the deployments in this medium- and heavy-
9 duty, that there's a long production cycle. And make sure
10 that you're keeping in mind the -- the length of time it takes
11 from a demonstration project to -- even to get to pilot
12 production, and then to actual production, and make sure that
13 that's -- that that's -- I think you note that in some of your
14 reports and appreciate that.

15 COMMITTEE MEMBER MCKINNEY: Okay. Thank you,
16 Michael.

17 MR. ORENBURG: And we have a public comment on the
18 alternative fuel infrastructure.

19 COMMITTEE MEMBER MCKINNEY: Oh.

20 MR. ORENBURG: Would this be the right time to do
21 that?

22 PRESIDING MEMBER SCOTT: Should -- so should we
23 go -- should we -- should we finish with the Committee
24 Members, and then we can just open up to the public and work
25 back through or -- up to you guys.

1 COMMITTEE MEMBER MCKINNEY: I think that -- that
2 makes sense. This will go pretty quickly here.

3 COMMITTEE MEMBER SHEARS: This is John Shears. I
4 just wanted to speak in favor -- in support of Erik White's
5 more recent comments in terms of, you know, workplace
6 training, and more generally in terms of working together and
7 how to figure out how to build capacity in the challenged
8 communities so that they have a great ability to take
9 advantage of the available resources and accelerate the
10 deployment of the advanced technologies in their communities.
11 I just wanted to, again, to be in support of Erik's
12 recommendation.

13 COMMITTEE MEMBER MCKINNEY: Great. Thank you, John.
14 Any other Committee Members on the phone want to
15 speak?

16 Then why don't we open it to the remaining category,
17 so emerging opportunities and workforce training. So we've
18 already had some comments on the -- the training allocation.

19 COMMITTEE MEMBER SMITH: And we had -- this is
20 Charles Smith.

21 We had also mentioned the regional readiness
22 category as well. So if there are any comments on that, now
23 might also be the time.

24 COMMITTEE MEMBER MCKINNEY: Anybody on the phone?

25 MR. ORENBERG: Nobody's mentioned it.

1 COMMITTEE MEMBER MCKINNEY: Okay. Why don't we then
2 go to kind of open public comment on these last categories.

3 PRESIDING MEMBER SCOTT: So just -- just a reminder,
4 even though we're a small group if you have a blue card and
5 you'd like to make a comment, just make sure that we get it so
6 we know.

7 Do you have any other blue cards on your pile right
8 now, Charles?

9 COMMITTEE MEMBER SMITH: I do not. So maybe we
10 just --

11 I have two subjects on my card.

12 COMMITTEE MEMBER SMITH: Yeah.

13 COMMITTEE MEMBER MCKINNEY: Oh, that's right.

14 COMMITTEE MEMBER SMITH: Maybe we just go to general
15 comments now.

16 COMMITTEE MEMBER MCKINNEY: Yeah, let's do that.
17 So --

18 PRESIDING MEMBER SCOTT: Yeah, here or wherever you
19 want.

20 MR. LEWIS: Thanks again for letting me speak.
21 Again, my name is Mike Lewis. I'm with Pearson Fuels. And
22 just a little history.

23 We have been doing this a long time. I've been
24 doing alternative fuel infrastructure for 15, 16 years. And
25 we built -- we built the first E85 site in the state. I built

1 the natural gas site. We operated that for many years. We're
2 working on another natural gas site. I've built two big
3 biodiesel blending facilities. I have five electric car
4 stations. I have a propane station. So you know, we've been
5 involved in a lot of these different fuels.

6 And again, thank you for your support. Back when we
7 were doing this there was no funding allocation for this. You
8 know, so it's -- it's been a long time coming. And it's --
9 it's good see, you know, when we feel like, oh, there's not
10 enough money, we only have \$25 million, so it's a different
11 perspective.

12 But this -- and a bit of a review. What I
13 understand the goals of this -- these projects to be is carbon
14 reduction, petroleum reduction, and decrease in -- basically
15 supporting the low carbon fuel standard, and I believe the
16 legislation says without adopting any one fuel or technology.

17 And the reason I didn't get to speak earlier is
18 because my category is missing up there, my E85 refueling
19 infrastructure category. And you know, you guys had mentioned
20 that there's -- you know, it's important to run this through
21 like a project cost benefit analysis. And I mean, when you
22 look at some of these fuels, I mean electric and hydrogen and
23 natural gas, I mean, there's -- there's fueling
24 infrastructure, there's vehicle incentives, there's vehicle
25 deployment, there's manufacturing, there's workforce training,

1 there's technology demonstration and scale-up, and -- and then
2 there's nothing for E85.

3 And I mean, to give you an example, my station which
4 was open in 2003 will do 800 or more gallons today, and it has
5 been doing that for years and years and years and will do that
6 for years and years in the future, and that's petroleum
7 reduction. If it does 800 gallons it's at least reducing 500
8 gallons of petroleum a day, every day, day after day, year
9 after year. So I mean, as far as cost benefit it's hard to --
10 to get much better than that, I mean, when you consider the
11 volumes. When you consider the volumes, I mean, you put an
12 electric charger in and the car sits there for eight hours,
13 one car on one charger.

14 You know, we -- I didn't mention, I've probably
15 sited more hydrogen stations than anybody in California for
16 these big hydrogen companies. And I think sometimes we get a
17 little insulated from the reality and make the perfect enemy
18 of the good. And I can tell you guys have funded a lot of
19 things. You've funded a lot of hydrogen stations that I
20 promise you will never be built. I mean, I hate to say it
21 that way, but I've been involved in some of those. And many
22 of those will never be built.

23 You know, you funded 161 E85 sites in this program.
24 You actually funded in 38 more that were kicked out because
25 they didn't get built. And now of 161, 19 of those are ours.

1 And I promise you those 19 will get built. But there's about
2 110 of those that are very likely to never be built.

3 And we've got a million flex-fuel vehicles, roughly,
4 in California. We've got nine flex-fuel vehicles for every
5 electric car in California. They're running about one percent
6 E85 through those vehicles. So when you look at carbon
7 reduction, E85 does extremely well. When you look at
8 petroleum reduction it does very well. A low carbon fuel
9 standard, 53 percent of the low carbon fuel standard credits
10 came from ethanol this year, down from 73 percent.

11 So don't let the perfect become the enemy of the
12 good because you can -- you know, you put \$1.7 million into a
13 hydrogen station and you could build 20 E85 sites for that.
14 You could build more than that. So I just hate to see it --
15 you know, I've been watching this and I hate to see it just
16 like disappear, you know, just like gone. There's not even
17 any more discussion about it.

18 And as I was saying earlier, with the biodiesel --
19 with those biofuel projects, if the contracts gets canceled,
20 you know, in this case these E85 contracts if they get
21 canceled are just going to go away. I mean, there's not even
22 a category for them. And I've seen it kind of happen in slow
23 motion over the last few years and it's bothered me so much
24 that I drove up here from San Diego just for this piece,
25 and -- and, of course, to listen to the whole day, too, and --

1 and drive back tonight. So just don't forget E85. I mean,
2 it's -- when you look at what the legislation is supposed to
3 do it's hard to get more bang for your buck than E85.

4 And my last point on this is Charles had said the
5 reason there's no E85 infrastructure this year is we wanted to
6 get through the existing agreements. And I can tell you,
7 again the hundred and some of those are likely to not be
8 built, you know, the relatively slow deployment and not a lot
9 of strong customer response -- I mean, there is a lot of
10 strong customer response. I agree there's slow deployment. I
11 mean, don't let the performance of one recipient reflect on
12 the industry or what the potential is out there for the
13 industry because I've opened three in the last three months,
14 and I'm going to open one a month for about the next year or
15 so. And I could just keep opening those if there was more
16 funding. But your average retail guys are not going to build
17 them on their own without some kind of support.

18 So thank you for letting me keep you, you know, from
19 going home, and listening to me for a few minutes. And if
20 there's any feedback or any counter arguments on this, I'd
21 love to hear something, because I've been writing letters to
22 the docket and meeting in person. And if anybody --

23 COMMITTEE MEMBER MCKINNEY: Well, yeah, Mike, it's
24 Jim McKinney here. You know, thank you for -- for making the
25 trip here and for your comments. And I think as we've said

1 over the years, you know, we've been concerned by the slow
2 build-out, by the slow consumer response, by some of the
3 pricing issues where there's not an apparent price benefit on
4 a DGE or a GGE basis. So whatever quantitative data you can
5 provide to us, you know, market data, pricing data, sales
6 forecasts, I think that's how to build a case for possibly,
7 you know, reinvigorating this category.

8 But from everything we've seen it's been a soft
9 market. And despite all the benefits that you laid out, that
10 it -- I think it really does have a good bang for the buck.
11 For consumers the flex-fuel vehicle seems to be grossly
12 underused in terms of E85 sales. So you know, whatever market
13 data you can provide, you know, suggestions on how to build
14 that, we'd be -- we'd be interested in learning more.

15 MR. LEWIS: Well, I appreciate it. And one more
16 comment on that I meant to say earlier also is, you know, when
17 you have your -- the -- the benefits, you know, the project
18 benefits --

19 COMMITTEE MEMBER MCKINNEY: Uh-huh.

20 MR. LEWIS: -- and then there's the -- what do we
21 call them -- the market benefits. And what did you call these
22 three things?

23 COMMITTEE MEMBER MCKINNEY: Expected benefits and
24 market transformation.

25 MR. LEWIS: Yeah. Exactly. I mean, the project

1 benefits are reasonably measurable, though you have to project
2 volume. And -- and there's an incentive to protect high
3 volumes if you're trying to get a grant, first of all. But
4 you know, we can project some volumes. But when you get into
5 the market transformation benefits, I mean, those are very
6 ethereal or whatever for -- I mean, if you don't buy into that
7 go look at the Fuel Cell Partnership's projections from 2009,
8 and we're supposed to have, what, 8,000, 10,000 vehicles this
9 year. So you know, it's hard to put -- I think sometimes we
10 just think these projections are as legitimate maybe as the
11 real project projections, and realize that these are, like you
12 said, the best possible scenario.

13 Anyway, so -- but I appreciate it. And I will send
14 you some stuff.

15 COMMITTEE MEMBER MCKINNEY: Yeah. And just kind of
16 one last observation. You know, for LCFS compliance, one of
17 the issues that gets raised periodically is the blend wall,
18 you know, the E10 blend wall. But another option for
19 increasing your ethanol sales is to -- you have a bigger E85
20 retail fleet and getting more of the, you know, kind of
21 locally produced ethanol with a lower carbon footprint, you
22 know, kind of cycled through that retail network. And that
23 was a thought that staff had several years ago, but that
24 really hasn't come to play.

25 So again, whatever information you can bring to our

1 record and our docket, we'd really appreciate that.

2 MR. LEWIS: Okay. Were you going to say something?

3 COMMITTEE MEMBER SMITH: Actually, I did have a very
4 sort of quick follow-up. On the things that you might provide
5 to us, would it be something like station throughput data that
6 you may have? Just in terms of, you know, any -- anything
7 that gives us a sense for expectations of gallons dispensed
8 per month or per year for -- for -- you know, obviously
9 different stations will have different throughput amounts. So
10 any -- any information in that regard would be good.

11 MR. LEWIS: Okay. Thank you.

12 COMMITTEE MEMBER GERSHEN: Real quick, this is Joe
13 Gershen again with CBA.

14 I support a lot of what Mike had to say, of course.
15 I do think, though, and I was going to -- I mentioned it very
16 early on in comments that I was going to talk about
17 infrastructure. And I think what we've seen, and we've talked
18 about this in the past, that there are something like 75
19 terminals around the state. And right now there are three
20 Kinder Morgan terminals that have put in biodiesel blending.
21 Chevron has got a terminal down in Montebello. Like Tesoro
22 and a couple others have some other terminals. But it's
23 something like 10 or 15 percent of the terminals in the state,
24 and maybe not quite that much.

25 So in order to, you know, fully implement in a more

1 robust way, I think for biodiesel certainly, I think, you
2 know, looking towards reinstating infrastructure on the basis
3 of getting some of these -- these blending terminals funded,
4 because obviously, I mean, Kinder Morgan is a good example,
5 they've -- they've sunk I think about \$5 million, I think per
6 terminal for three terminals. They're looking, I think at
7 doing one in San Diego next. But you know, the market does
8 sort of indicate where they're going to -- where they're going
9 to decide to put funding. And obviously with low fuel prices
10 now it's more difficult to justify. Some signals from the
11 state towards those sort of things would make a lot of sense.
12 So it's -- so converting some more of these storage and
13 blending infrastructure terminals around the state, I think
14 our industry would be really supportive of that as well.
15 Thanks.

16 COMMITTEE MEMBER MCKINNEY: Okay. One last call for
17 comments before we turn to Commissioner Scott for closing
18 remarks and next steps.

19 COMMITTEE MEMBER SMITH: Oh, yeah.

20 MR. BUNNELL: It was still part of that last one.

21 COMMITTEE MEMBER SMITH: Oh, yeah. So we -- we have
22 sort of the -- the third part of --

23 MR. BUNNELL: My trilogy.

24 COMMITTEE MEMBER SMITH: -- comment from Bill
25 Bunnell. And then after that we also have a comment from

1 Michael -- Michael Coates again.

2 MR. BUNNELL: Well, it's more of a question to you
3 guys. But in -- what you said earlier, and actually what you
4 said earlier in terms of natural gas, and you were just
5 talking about ethanol, you guys are looking at what's the
6 feedstock that creates it and what's the global footprint of
7 hauling it over here for Iowa, let's say, with -- with ethanol
8 of the amount of methane mixture of -- biomethane mixture and
9 the natural gas.

10 And I just saw a report by the United States Energy
11 Department on comparing electricity in vehicles and how it
12 actually increased the global footprint depending on what
13 feedstocks were used to make it. And in the United States the
14 bulk of it was coal.

15 And so I wonder if you guys are even assessing this
16 or giving it a value when you're evaluating what makes sense
17 to do and what not to do? Because although we might be
18 shifting that pollution to a different area we might actually
19 be increasing it.

20 And if the goal is to decrease it, the report I saw
21 I think it said hydroelectric was the only one that actually
22 decreased the amount of carbon footprint. And then biodiesel
23 and ethanol were rated highly. Natural gas was rated highly.
24 But even I think solar and wind were increased at something
25 like 60 to 70 percent. Is that evaluated, the feedstock going

1 into what's creating this -- this electricity for these
2 vehicles?

3 COMMITTEE MEMBER MCKINNEY: Charles, why don't you
4 start.

5 COMMITTEE MEMBER SMITH: Okay. So -- so, yes.
6 Short answer, yes. So we rely on a sort of life cycle
7 greenhouse gas emission analysis that the Air Resources Board
8 develops as part of their low carbon fuel standard. And so
9 they -- they look at, you know, all -- all reasonable upstream
10 emissions resulting from a vehicle, whether that's the
11 electricity generating power plants in California or around
12 the state -- or around the U.S. where California gets its
13 electricity from to come up with the greenhouse gas carbon
14 intensity for electric vehicles. And then it does a similar
15 thing to track the upstream emissions for natural gas, for
16 ethanol, for gasoline and diesel as well.

17 And so they come up with the low carbon fuel
18 standard carbon intensity numbers, and it's really useful
19 information. You can find it on their website. But it has
20 just a long list of pathway descriptions and then what the
21 relative carbon intensity is for each of those. And so
22 that -- and so that is something that we're -- we take very
23 seriously. Those numbers, of course, always get updated as
24 the fuel pathways change, as new analysis gets done. So
25 it's -- it's never a dead issue by any means.

1 MR. BUNNELL: So is this report shedding new light
2 on that? Because what they were saying in this report, and I
3 know we use more natural gas on the West Coast than they do
4 nationwide, but it was 270 percent increase in greenhouse gas
5 emissions using electric vehicle based on the average mix in
6 the United States.

7 COMMITTEE MEMBER SMITH: Yeah. I'm not familiar
8 with that specific report.

9 MR. BUNNELL: I think it was University of Minnesota
10 or University of Michigan, and it was commissioned by the
11 United States Energy Department.

12 COMMITTEE MEMBER MCKINNEY: Okay. All right.

13 MR. BUNNELL: Just -- it was -- I think it came out
14 like three or four weeks ago.

15 COMMITTEE MEMBER MCKINNEY: Yeah. Yeah. I was
16 going to say, I would just urge some caution on average
17 numbers versus, you know, marginal numbers.

18 MR. BUNNELL: Well, they did break it down by
19 feedstock, actually.

20 COMMITTEE MEMBER MCKINNEY: Okay. And I was
21 thinking more of kind of the geographic margin here, so in
22 California. So if you assume kind of 80 percent of our
23 electricity supply is clean natural gas and you combine cycle
24 turbines, the other 20 percent is renewables, 100 percent
25 renewables. So that's kind of the -- the benchmark that we

1 use.

2 So the -- the great tool that Charles was referring
3 to, there's -- there's a national version and there's a
4 California-specific version. And that's why you have say
5 companies like Joe is involved with in biodiesel, our ethanol
6 companies all have a lower carbon footprint than their
7 national counterparts. And it's especially true for electric
8 vehicles. Our resource mix is one of the cleanest in the
9 country. I think it would just be a few states with a very
10 large hydroelectric quotient in their resource mix. But they
11 are -- they tend to have a lot of coal, too, so in Washington,
12 Oregon, and some of the New England states.

13 So I would just say, you know, kind of read it
14 carefully and see what they say specifically about
15 California --

16 MR. BUNNELL: Yeah. I didn't know --

17 COMMITTEE MEMBER MCKINNEY: -- versus the rest of
18 the country.

19 MR. BUNNELL: -- and that's why I posed the
20 question. You guys -- I'm just a guy that runs a gas station,
21 and you study this all day every day. So thank you very much.

22 COMMITTEE MEMBER MCKINNEY: Thank you.

23 PRESIDING MEMBER SCOTT: Any more blue cards?

24 COMMITTEE MEMBER SMITH: Yeah. We had a blue card
25 from Michael Coates.

1 MR. COATES: Thank you. Just real quick. Again,
2 it's Michael Coates with Mightycomm, not representing a
3 specific plant at this point but more kind of a portfolio of
4 folks that we work with in industry.

5 I wanted to underscore, and I know you're -- you're
6 going to be applying it more, but underscore Governor Brown's
7 50 percent petroleum reduction by 2030. I think it changes
8 the playing field in a sense. In terms of looking at your
9 investments you need to strategically look at near-term,
10 midterm, and long-term investments, and particularly put a
11 little more focus on some of the near-term ones that can drive
12 this 50 percent reduction. And I would just mention, of
13 course, this has been codified by Senator de Leon's bill that
14 he just introduced, SB 350.

15 But I think you can -- you can focus on a lot of
16 currently available and currently deployable technology. The
17 DOE's Super Truck Program, for instance, with -- in the heavy-
18 duty field showed a 50 percent fuel economy improvement while
19 still using the conventional diesel engine. So without even
20 doing other fairly minor modifications to the efficiency of
21 the engine they were able to get those kind of reductions.

22 I applaud you look at ITS, along with some of the
23 vehicle technology, because I think that will help capture
24 some of those kind of improvements. I would also say that I
25 think a near-term focus does bring the discussion back to some

1 of the things Joe was talking about in terms of biofuels.
2 Those are currently deployable technologies that can be put
3 into place to immediately reduce petroleum. As Mike was
4 saying about E85, biodiesel, renewable diesel, that's
5 something that can help move us toward that 50 percent
6 reduction very quickly.

7 So thank you very much.

8 COMMITTEE MEMBER MCKINNEY: Great. Thank you for
9 that.

10 Any more comments? Are there any more blue cards?

11 I did want to add something to the record from
12 Leslie Baroody who is our EV Team Leader, going back to the
13 comments from Dr. Green. So our next solicitation workshop
14 for infrastructure funding actually will focus on DC fast
15 chargers in a corridor setting. So that's kind of -- stay
16 tuned for that.

17 So, Commissioner, that's all I had, Charles.

18 MR. KNIGHT: Jim, this is Ralph Knight at Napa
19 Valley Unified. Do you hear me?

20 COMMITTEE MEMBER MCKINNEY: Loud and clear, Ralph.

21 MR. KNIGHT: I'm sorry. I've had nothing but
22 problems all day long with the internet here, so we've had
23 issues. I just wanted to say you guys have done a great job
24 putting this together.

25 Just for information as far as electric charger

1 infrastructure, Napa Valley Unified now have five -- six sites
2 now in operation as far as solar systems are concerned. So we
3 are putting two charge station at each one of those school
4 sites that will be open 24 hours a day, and the charging will
5 be free for -- for the public to be able to use those. So
6 just a thing that we want to throw out there to kind of help
7 the charging issues and all of that.

8 And I guess the other concern that I'm hearing from
9 some districts within the Bay Area is that we've got some
10 districts that are wanting to be involved in alternative fuels
11 that have never come to the platter before. But the
12 disadvantaged area thing is really kind of hitting a lot of
13 our people, me being one of them, but a lot of our people in
14 the Bay Area, kind of hitting them pretty hard where they
15 can't get involved with things like that because they may fall
16 in an area that doesn't qualify for that.

17 COMMITTEE MEMBER MCKINNEY: Okay. Thanks. Thanks
18 for that information, Ralph. Yeah. And I -- and I think you
19 know our -- our ARFVTP funding on under AB 8 is -- is less
20 constrained by some of those factors in the Greenhouse Gas
21 Reduction Fund fundings that Erik Knight [sic] and others have
22 talked about that ARB is administering.

23 MR. KNIGHT: Right. And I guess if I could share
24 some email or phone numbers with Tyson, that would be great if
25 I could.

1 PRESIDING MEMBER SCOTT: Sure. Ralph, we'll make
2 sure you get Tyson's information.

3 Is he still there?

4 MR. KNIGHT: Thank you.

5 PRESIDING MEMBER SCOTT: You're welcome.

6 Any others on the phone? Any public comment on the
7 phone?

8 MR. ORENBURG: I think Ralph was the last one, yes.

9 PRESIDING MEMBER SCOTT: Okay.

10 COMMITTEE MEMBER SMITH: So this is Charles. I just
11 want to remind people that we're asking for any additional
12 comments by February 19th, a week from today. And if you
13 could send those in to the docket email address on -- on the
14 screen here, subject 14-ALT-01, and cc: me, that way we get it
15 that much quicker and we can look forward to incorporating
16 those into the Lead Commissioner Report.

17 PRESIDING MEMBER SCOTT: Terrific. Thank you so
18 much, Charles.

19 I just wanted to say in closing, really, thank you
20 very much to our staff for the great job that they did in
21 putting together the presentations and the work that they've
22 done to build our Investment Plan. I wanted to thank our
23 Advisory Committee for all of the terrific feedback that you
24 continue to give us in your engaged participation here at
25 these meeting. And also all of our stakeholders. We really

1 appreciate the -- the information, your engagement, your
2 participation in this program as well, so thank you for that.
3 Thank you for spending your day here with us.

4 And I want to also thank our -- our friends at the
5 San Joaquin Valley Air Pollution Control District, and Todd
6 DeYoung for his great presentation. Thank you so much for
7 hosting us here. We're just delighted to do this in Fresno.
8 And you made it really easy for us by volunteering your room,
9 having terrific WebEx capability. And so we -- we appreciate
10 that very much.

11 I have been diligently taking notes on my iPad as we
12 went through the day. I won't go back and summarize all of
13 the -- the highlights. But we do have them and we take that
14 into account as we're putting together the next version. And
15 if you have anything you didn't get to say, please do submit
16 it to us in writing, as Charles has asked for, by February
17 19th.

18 So thank you so much to everyone. I think we're
19 adjourned.

20 (The Meeting of the California Energy Commission
21 adjourned at 3:18 p.m.)
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24
25

CERTIFICATE OF REPORTER

I, JACQUELINE DENLIGNER, an Electronic Reporter, do hereby certify that I am a disinterested person herein; that I recorded the foregoing California Energy Commission Meeting and Public Workshop Regarding Alternative and Renewable Vehicle Technology Program; that it was thereafter transcribed.

I further certify that I am not of counsel or attorney for any of the parties to said conference, or in any way interested in the outcome of said conference.

IN WITNESS WHEREOF, I have hereunto set my hand this 12th day of February, 2015.

/s/ Jacqueline Denlinger
JACQUELINE DENLINGER

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I certify that the foregoing is a correct transcript, to the best of my ability, from the electronic sound recording of the proceedings in the above-entitled matter.

/s/ Martha L. Nelson
MARTHA L. NELSON, CERT**367

February 28, 2015