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

In the Matter of:	)
	) Docket No. 11-ALT-01
2012-2013 Investment Plan	)
	) Meeting and Public Workshop
	) RE: 2012-2013 Investment Plan

Advisory Committee Meeting and Public Workshop

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

THURSDAY, APRIL 19, 2012
9:00 A.M.

Reported by:
Tahsha Sanbrailo

APPEARANCES

Commissioners (and their advisors) Present:

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

Robert Weisenmiller, Chair

Staff Present:

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

Advisory Committee Members Present: (via WebEx)

Janelle Beland, California Natural Resources Agency
Tim Carmichael, California Natural Gas Vehicle Coalition
Will Coleman, Mohr Davidow Ventures
Peter Cooper, California Labor Federation
Tyson Eckerle, Energy Independence Now
Steve Ellis, for Justin Ward (California Fuel Cell Partnership)
Bonnie Holmes-Gen, American Lung Association
Steve Kaffka, California Biomass Collaborative (Courtesy of University of California, Davis)
Ralph Knight, Napa Valley Unified School District
Howard Levenson, CalRecycle
Robert Meyer, California Employment Training Panel
Jack Michael, Recreational Boaters of California
Simon Mui, Natural Resources Defense Council
Jananne Sharpless, Member at Large
John Shears, CEERT
Eileen Tutt, California Electric Transportation Coalition
Erik White, Air Resources Board, on behalf of Tom Cackette

Public Comment:

Kyle Jenke, Edeniq
Ken McKinney, Verizon
Nina Kisch, Pacific, Gas & Electric
Mira Inbar, Dow Kokam
Volker Amelung, Quantum Technologies
Lucy Negrete, Air Resources Board
Camron Gorguinpour, DOD
Joe Gershen, Cruzer Renewable Energy (California Biodiesel Alliance

APPEARANCES (Continued)

Public Comment: (Continued)

Martin Wahl (on behalf of Atul Deshmane)
Paul Camp, Indicom
Andreas Klugesdad, BMW
Jamie Hall, CALSTART
Michael Block, Electrification Leadership Council
John Clements, Kings Canyon Unified, Central Valley Transportation Center (partner, City of Reedley)
Matt Miyasato, South Coast Air Quality Management District
Atul Deshmane, Whole Energy Fuels
Russell Teall, Biodico
Matt Horton, Propel Fuels
Rebecca Breitenkamp, Oberon Fuels
James Provenzano, Clean Air Now

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P R O C E E D I N G S

APRIL 19, 2012 9:05 A.M.

MR. SMITH: Good morning, everyone. My name is Charles Smith. I'm the Project Manager for the 2012-2013 Investment Plan for the Alternative and Renewable Fuel and Vehicle Technology Program.

I'd like to start with a few housekeeping items. We are sitting in Hearing Room A. This conference is being recorded through WebEx. For those of you not familiar with this building, the closest restrooms are located just over there, there's a snack bar on the second floor under the white awning and, finally, in the event of an emergency and the building is evacuated, please follow staff to the appropriate exits. We'll reconvene at Roosevelt Park, located diagonally across the street from this building. Please proceed calmly and quickly, again, following the employees with whom you are meeting, to safely exit the building. Thank you.

So with that, I'd like to turn the meeting over to Chairman Weisenmiller and Commissioner Peterman.

COMMISSIONER PETERMAN: Good morning, everyone. Welcome. Thank you for joining us. We've got a good turnout here in the room and I'm sure we have many other interested parties listening on the line. This is

Commissioner Carla Peterman. I'm Lead Commissioner on Transportation.

I want to thank everyone, and all our members, for joining us for the second meeting of the AB 118 Advisory Committee for the 2012-13 Investment Plan. Some of you have been participants since the first plan was developed, and I'd also like to welcome new members. Today representing the California Natural Resources Agency, we have Janelle Beland, thank you for joining us.

And I also wanted to just take a second and provide a little bit of background context again about what we're doing here as we move forward into the details. AB 118, at approximately $100 million, is the main source of incentive funding in California for Alternative Fuels and Vehicles. Both the Energy Commission and Air Resources Board administer different parts of the fund with slightly different guidance from the law with clear objectives. The Energy Commission intends to have a broader mandate under the law and is expected to take an overarching holistic view of the various options that are before us in the near term and the long term.

The Energy Commission concludes that we face a great challenge to balance job growth and economic development with efforts to achieve greenhouse gas

emission targets, petroleum displacement goals, criteria pollutant reduction requirements, and Bioenergy Action Plan goals. With the 118 fund to address this challenge, we feel it's important to have a balanced diverse portfolio. As a result, you will see this approach reflected in the Investment Plan before you.

I think it's also worth mentioning what we've done so far, all of us together, with the Investment Plan to date. The first tranche of funding, $197 million, invested from Fiscal Years 2008 and '09, and Fiscal Years 2009-10, verifies the direct benefits of 87 projects, as of today, and project benefits in 2020 based on high and low range of commercialization. These numbers show direct employment of 5,400 jobs. Additional work is needed to verify further supply chain opportunities, and I don't expect this number to increase. We've also seen a potential for significant petroleum displacement, potential to achieve one to four percent of the goals for these objectives so far with what we've invested.

So great work has been done and there's more to do going forward. I'm particularly interested in: have the near term opportunities and challenges changed? Are there some areas where we should be investing now because the opportunity and time is ripe? Are there some areas where we can take a pause and see how current investments

are doing and wait for projects to materialize?

Once again, thank you to all for your involvement and I'd also like to acknowledge Energy Commissioner Jim Boyd, who is with us today as a member of the public. He will continue to give us good insight, I'm sure, and I welcome all his thoughts and comments. And with that, I'll turn it over to Chair Weisenmiller for any additional.

CHAIR WEISENMILLER: Thank you, thank you for coming and participating today, certainly would like to thank Commissioner Peterman for her thoughtful comments.

I think all of us realize the transportation system is really at the nexus of our national security, air, and jobs issues. And certainly the Governor's recent Executive Order sort of highlights that for all of us, the importance of diversifying our transportation mix and capturing the unique opportunities we face now to try to really make a fundamental difference there. So with that, I again look forward to your participation today.

MR. SMITH: So at this point, why don't we have the Advisory Committee members who are here in the room and those online introduce themselves. Perhaps we can start with Jan.

MS. SHARPLESS: Yes, Jan Sharpless, former Chair of the Air Resources Board and former Energy

Commissioner.

MR. SMITH: Thank you.

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

MR. MEYER: Robert Meyer with the California Employment Training Panel.

MS. BELAND: Janelle Beland, Undersecretary at California Natural Resources Agency.

MR. ECKERLE: Tyson Eckerle with Energy Independence Now.

MR. MICHAEL: Jack Michael representing Recreational Boaters of California.

MR. MUI: Simon Mui with Natural Resources Defense Council.

MR. KNIGHT: Ralph Knight, Director of Transportation, Napa Valley Unified School District.

MR. WHITE: Erik White with the Air Resources Board on behalf of Tom Cackette.

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

MS. TUTT: Eileen Tutt with the California Electric Transportation Coalition.

MR. KAFFKA: Steve Kaffka, U.C. Davis and California Biomass Collaborative.

MR. LEVENSON: Howard Levenson, CalRecycle.

MR. SMITH: Is there anyone on WebEx? Any Advisory Committee members participating via WebEx?

MR. COLEMAN: Will Coleman from Mohr, Davidow Ventures.

MR. SMITH: Thank you, Will. Anyone else? Okay. Well, moving right along, the next item that we have on the agenda is a program status update, which will be delivered by the Office Manager for the Emerging Fuels and Technologies Office, Jim McKinney.

MR. MCKINNEY: Good morning, members of the Advisory Committee, stakeholders, Commissioners, senior staff, and all the staff in our program that really helped make this thing happen. So, again, Jim McKinney, I'm Manager of the Emerging Fuels and Technologies Office, and we administer the AB 118 Program, and I'm going to give you a brief update on where we are thus far with getting the money out the door, as we like to say. And, so, as a brief reminder, so the goal of the Alternative and Renewable Fuel and Vehicle Technology Program is to use public money to advance the development of advance technology vehicles, fuel production, and fuel infrastructure systems to help the state meet its climate change policies and goals.

We also have as policy goals to reduce petroleum dependence in our state. On average, we use

about 18 billion gallons of gasoline, ethanol, and diesel every year in this state; it's a very big number, and our goal is to reduce that, and also to promote economic development. As Commissioner Peterman noted, there is a very good jobs development aspect to our program.

Each year, the legislation directs us to develop an Investment Plan that begins with staff recommendations on how to allocate funding across all the categories, that then goes through several rounds of this Advisory Committee process and culminates in the Commission adoption of the plan, which is scheduled for May 9th of this year.

The role of the Advisory Committee is to serve as, say, expert stakeholders for each of the fuel categories and subject areas for which they are expert, and have the public forum, public dialogue in how to incorporate their feedback into the funding allocations.

In terms of going to the mechanics of our program, we are now in Year 4 of a $7.5 million program. Thus far, we have allocated about $362 million and about $207 million is locked into grants, and those are over $200 million for grants and interagency agreements.

We've been very busy since the beginning of this calendar year, so we have $175 million that we're trying to get out in Fiscal '10-'11 and '11-'12 money. A

little over $70 million of that we need to encumber for the June Business Meeting, or by June 30th of this year, and we are well on track to do that.

I'm going to talk a little bit about the individual solicitations and grants. So one of the innovative solicitation areas that we've done -- does somebody else have control of this? There we go. So Regional PEV readiness, you know, kind of following along with the Governor's Initiative on Zero Emission Vehicles, Electric Cars, Electric Trucks, we've been doing a lot of work in that area for infrastructure development and advance truck development. Our partners at ARB have been managing the -- can we get the little notes not to clash here, is that possible -- our partners at ARB who are doing the vouchers for light-duty electrics and then hybrid and all-electric trucks. So part of this, one of the issues we have identified is the need for coordination at the regional level on planning, how should EVSE, or Electric Charging Systems be deployed, what's the right balance between home, workplace, public charging, other public areas? What are the permit standards? This is proving to be a real issue in getting the money to the ground and getting these chargers installed as efficiently as possible.

So we have now awarded nine grants throughout

California, two regional MPOs, these are really good stakeholder collaborations, and we think we're getting a great return on investment because we're only putting in $200,000 for each one.

So we have about 27 million vehicles in California, one million of those are trucks, medium-duty and heavy-duty trucks, so it's about four percent of the vehicle fleet. They use 16 percent of the fuel and concurrently generate about 16 percent of the particulate matter and criteria emissions and GHG emissions. So we are putting a lot of effort and a lot of money, working very closely with some advance stakeholders to get the Advanced Technology packages into goods movement, waste hauling movement, transit, and a lot of other areas.

We had $16.9 million awarded this year, so 11 in projects for four applications, and we were oversubscribed in this category, so we have 18 projects that we're not going to be able to fund. And there's a really really good mix of projects here, so a lot of all-electric platforms for transit, medium-duty trucks for goods movement, there's some very interesting hybrid trucks, some of those are plug-in electric. We have one LNG, I think a Class 7 or 8 tractor that's also a plug-in electric, that's an innovative technology, and some good movement on the gas, natural gas trucks, and we're very

excited to continue funding this part of the program.

Vehicle Buy-Down, this refers to what we call gaseous fuels, so this is natural gas and a little bit of propane. Since the last Advisory Committee meeting, about 480 natural gas vehicles, primarily trucks, $9.7 million, 60 propane vehicles, and 50 propane school buses, and we're very pleased with that. You can see the class break-outs here. And, really, all the major truck manufacturers have platforms with either CNG compressed natural gas, or liquefied natural gas to offer. That market is booming. A lot of this has to do with the ever declining price of natural gas and the increase in supply, so we are very excited about this.

For Biofuels Production, we were also heavily over-subscribed. On this one, we had 54 proposals totaling nearly $130 million. For round one, we're going to award about $19.5, that NOPA was posted late March, so four of these are diesel substitute or what we call biodiesel projects, three of those are going to be kind of standard biodiesel, I guess you'd call it, kind of second-generation, and they're all from waste-based feedstock, so primarily the waste greases and oils generated by the food processing industry here in California.

We do have one renewable diesel project which

is really important for the future to kind of do away with the dual or parallel infrastructure that's needed to get biodiesel into the market.

We have our second cellulosic ethanol award. The first of those went to Aemetis last year and now EdeniQ is getting another one, another algae-based project, which is also a good harbinger for the future, and then a large-scale biogas production facility based on anaerobic digestion of MSW feedstocks.

For alternative fuel infrastructure, kind of some interesting results this year. One of those is that three of the funding categories, so natural gas, biodiesel, and propane, all of those were undersubscribed and, as you can see, we actually had zero applications for propane. I think you'll see later in the program presentation today this tracks with the staff recommendations to ramp down, and perhaps zero out, some of these funding categories. Nonetheless, there are some really really good projects in here.

For Natural Gas Infrastructure, we're very pleased, eight school districts applied, and I think most of those will get an award. We have our first pending award to a tribe, a Native American Tribe, and some good RNG projects, as well. This NOPA, we hope to post later today or first thing tomorrow morning, and I really want

to thank our staff for the great work they did crunching through all those good proposals that came in. E85, we got good response on that and I think we'll have some strong packages to announce.

So the way we're doing several of these is that we're separating out what we call round 1, so the money that we have to encumber by June 30th of this year, those all have to be CEQA-ready projects. We're well underway, well on track to meeting that deadline. The balance of those we call Round Two, we will process through those in the summer and fall of the calendar year.

For manufacturing, we have $10 million allocated in '11-'12 money, and then we have another $20 million allocated in this '12-'13 Investment Plan that we're discussing today, so we received 15 proposals totaling $53 million, $130 million proposed in match funding, so you can see we're over-subscribed in this category. It looks like another exciting mix of manufacturing and retooling projects, primarily in the electric drive category.

Hydrogen fueling infrastructure -- and I want to acknowledge our colleagues at the Air Resources Board and the major stakeholder, the Fuel Cell Partnership, for the good work on this. We received five proposals totaling 17 stations, $23 million, and we expect to make

the NOPA announcement next week.

Workforce Development and Training, again, this is a very important and successful part of our program. The program awards that we've done thus far in, I think, the January-February Business Meeting, total about $1.25 million, which will cover about 1,500 trainees.

Emerging Opportunities, or sometimes called Federal Cost-Share, for the fiscal year '10-'11 money, about $5 million of this, we think, will go to JCAP, the Joint Center for Artificial Photosynthesis, that's a combination Cal Tech, LBL, and I think U.C. Berkeley consortia. We also have an exciting development with what we call Air Force Base Electrification; the military really continues to help drive the transition to alternative fuels and electrification, that's very exciting.

And then, for Program Support, so these are our tech support contracts, MVNE, the Rand Corporation one the award for our MVNE contract, and that work will start coming in over the next 18 to 24 months. We are developing major technical support contracts with U.C. Davis Next Steps Program based at the Institute for Transportation Studies, very very strong team of national and world class researchers in all the subject areas we work in. Similarly, with NREL, National Renewable Energy

Lab, I saw Mark Molina come in today. We're also doing a major tech support contract with them. These do not overlap, don't worry, these complement each other very well and we're very excited to get such world class tech support onboard.

We are continuing our work with the U.C. Irvine Program and the street model, which is really important for both hydrogen siting and it's been expanded to cover the other fuel categories. So that concludes my presentation and I think we can take some clarifying questions, if any. If not, I'll turn the program back over to Charles.

MS. TUTT: This is Eileen from Cal ETC. Just a quick question on Slide 11. The -- you said the infrastructure funds for electric vehicles have already been encumbered, but there's no -- I don't really understand, like how much was --

MR. MCKINNEY: Sure.

MS. TUTT: -- it's not as clear as the rest of it.

MR. MCKINNEY: Yeah, and I also left out the single biggest batch of infrastructure proposals that came in.

MS. TUTT: Yeah, I mean, I saw all the announcements and they're very impressive, but I don't

see it reflected here.

MR. MCKINNEY: Yeah. So we expect to -- and I have to be a little circumspect, so we haven't posted the NOPA yet, but we expect to have the NOPA total 15 grants and that will be for, again, natural gas and LNG, fueling stations, biodiesel, and then E85. Now, all of the EVSC, all the Electric Charging grant, we actually got nearly 200 proposals in that subject area. A lot of them are class 3 fast chargers, or level 3 fast chargers, and then level 1 and 2. That is all '11-'12 money, so we have put those aside and we will begin processing those as we finish up the grants to encumber the fiscal year '10-'11 money. So does that answer your question?

MS. TUTT: You're just saying that there was no '10-'11 money for Electric Vehicle Charging, but there was obviously over-subscription in '11-'12, if I understand it?

MR. MCKINNEY: Correct.

MS. TUTT: Okay, thank you.

MR. MCKINNEY: That's correct. Any other clarifying questions? Then I'll give this back to Charles.

MR. SMITH: Thank you, Jim. So, briefly, this is our schedule of past, present and future for the 2012-2013 Investment Plan. As most of you will recall, we

held our first Advisory Committee meeting on February 10th, we issued a revised staff draft that is the current version of the document on April 5th, and in anticipation of today's second Advisory Committee Meeting on April 19th.

We're going to need to do a quick turnaround to post any final revisions to the Investment Plan by April 25th, that will allow us to get the meeting before our May 9th Commission Business Meeting. This is a part of a statute that requires us to have a completed Investment Plan to the Legislature in time for the Governor's May revise to the Budget.

The Revised Staff Draft is largely similar to the original staff draft, but incorporates input that we've received since that time. This includes roughly 30 submitted docket comments, ongoing meetings that Commissioners and staff have held with various stakeholders, as well as the input from 18 Advisory Committee members and 30 other public comments at the last Advisory Committee meeting.

The text provides updated information on our recent solicitations, regulations, and other market developments, and the revised staff draft also settles the funding allocations for the 2012-2013 Investment Plan. As you may recall, the original staff draft

provided several allocations that were "up to" amounts. In this version, we have tried to solidify those funding recommendations; however, they are still subject to adjustment based on any final input and discussions that we received here.

Moving now into the various sections of the revised staff draft, we start with the fuel production and supply updates. We have clarified the eligibility of jet and aviation fuels to qualify for our fuel production funding allocation. This is a very big category; it includes roughly three billion gallons of jet fuel dispensed in California annually, and much of that at very specific sites, so it's easier to target higher volumes.

We've also, in response to several comments we've received, described the evaluation criteria for biofuel production projects. These are based on the evaluation criteria that we used in our recent biofuel production solicitation, and there's a footnote that links to that solicitation document, that can provide much more specific information about the relative weight of each scoring criteria. And finally, we've retained the recommended $20 million combined allocation, so, again, for diesel substitutes, gasoline substitutes, biomethane, and now renewable jet and aviation fuels.

Moving on to infrastructure updates, in the Electric Drive Charging Infrastructure section, we've incorporated a brief discussion on potential grid impacts. Briefly, it's not a particularly significant impact under the Commission's mid-case demand forecast; we expect electric vehicles to account for perhaps half a percent of annual energy need by 2020, and perhaps one-tenth of a percent of daily peak need.

For Fast Charger Standards, we've also added a discussion about the currently deployed CHAdeMO standard for fast chargers, as well as the combo standard which is under development by the SAE and other standard organizations. Just to be clear, the Energy Commission is supportive of either -- supportive of installations that include either of these standards and preferably both of these standards.

There is information on the Governor's Executive Order for ZEVs and ZEV infrastructure. This is related to the NRG Energy, Inc. agreement that was reached which, as many of you know, provides roughly $100 million for different types of charging infrastructure. The Energy Commission will be coordinating with the NRG Energy Company, as well as other sister agencies, in making sure that the funding that we have provided so far, and the funding that we continue to provide for

Electric Vehicle Charging Infrastructure, doesn't become duplicative of the NRG projects. And for that category, we retained the $7.5 million allocation.

Moving to Hydrogen Fueling Infrastructure, there is a little bit of updated information on the station needs by 2014 and 2015. Briefly, we anticipate a need for roughly 45 stations by the end of 2014 and approximately 68 stations by the end of 2015. For comparison, after our current hydrogen infrastructure solicitation is completed, we will likely have perhaps 31 to 37 stations publicly available.

We've also incorporated an emphasis on O&M funding for hydrogen infrastructure stations, in addition to upfront capital cost, and we have retained the original $11 million funding allocation. Still in infrastructure, for E85, as Jim may have mentioned, we have already funded roughly 85 E85 fueling stations around the state. These are proceeding slowly, but steadily.

We have also allocated an additional $10.1 million in the current infrastructure solicitation for E85 stations. And given these investments, as well as the ongoing concern over the per gallon cost differential between E85 and gasoline, we've provided a limited amount of funding for E85 filling stations in the '12-'13

document.

For Natural Gas Fueling Infrastructure, again, we see a somewhat slower roll-out of previously funded stations, as well as an emphasis on support for vehicle deployment has led us to revise our allocation from up to $2.5 million to about $1.5 million.

For Propane Fueling Infrastructure, in the previous Investment Plan, this was originally funded as targeting a specific need; however, as Jim pointed out, we didn't receive any proposals for propane fueling infrastructure in our recent solicitation, so we'll be discontinuing funding for that category until we can identify more specific needs.

So these are the funding allocations for '12-'13. We are, of course, open to revisiting and reassessing such needs as we begin development of the 2013-2014 Investment Plan.

Moving on to Vehicles, and starting with Natural Gas Vehicles, there were not any substantive revisions in that section of the document. Propane vehicles, as Jim mentioned, we've had a slightly slower demand for propane vehicles than we have for natural gas vehicles, and so we have revised the allocation from up to $4 million to a more concrete $2 million funding allocation.

For Light Duty Plug-In Electric Vehicles, we have included updated information on the Air Resources Board's Clean Vehicle Rebate Program, which provides vehicle incentives to the consumer for these types of vehicles. The ARB issued a staff discussion document earlier this month for their development of their 2012-2013 funding plan, similar to our investment plan. It anticipates an allocation ranging perhaps from $13 to $17 million and, while that is significant, it may not necessarily be sufficient to meet the number of light-duty plug-in electric vehicles that are expected over the course of the coming year. So we are in ongoing collaboration with the ARB on the relative demand and funding needs for the Clean Vehicles Rebate Program.

Moving to Medium- and Heavy-Duty Advanced Technology Vehicles, and focusing first on deployment, again, we are in ongoing collaboration with the ARB on the demand and funding needs of the HVIP, or Hybrid and, now, Zero Emission Vehicle and Truck Incentive Program. In the staff discussion document, as I mentioned that ARB released, there is some leftover HVIP funding from previous fiscal years and the ARB will also be providing a higher incremental incentive for zero emission vehicles, which is encouraging as we've seen a lot of demand for those kinds of vehicles to be not just

demonstrated, but deployed. The ARB staff discussion document includes a range of $5 million to $11 million for the HVIP and, so, again we will be in ongoing collaboration with the ARB in the coming days and weeks, months, on demand and funding needs for the HVIP.

To Demonstration Projects, we have provided updated information on our recent solicitation in this area, which Jim briefed you on. We've added an emphasis on the projects that we are especially interested in, those being drayage and goods movement vehicles, and we have increased the funding allocation to $4 million.

Moving on to Emerging Opportunities, in this section, we provided updates in the form of the identification of potential projects. Perhaps you might recall at the last Advisory Committee meeting, we were a little concerned about the difficulty in both identifying and providing funding for projects under this category. Since then, we've had some good opportunities arise in terms of Federal cost-sharing projects, so there were two energy innovation hub projects released by the Department of Energy, Federal Department of Energy, the first being for the Fuels for Sunlight Project, which is going to be covered by the Joint Center for Artificial Photosynthesis that Jim mentioned. Additionally, there is another hub project that the DOE is planning to fund for batteries

and energy storage that we'll be paying close attention to.

We have the U.S. Air force Base Vehicle Electrification Projects to look forward to, as well as Vehicle to Grid Demonstration, and we also have an ongoing interest in developing perhaps a small grants program. For those of you familiar with our PIER Program at the Energy Commission, they have a small grants program of their own that has been quite successful, and so we might look to emulate that.

So given these identified opportunities, we've increased the funding allocation from $1.5 million to $3.5 million. For manufacturing and workforce development training, there weren't any significant revisions to the manufacturing section retaining the original funding allocation of $20 million. In the workforce development and training section, we've provided a summary of our work with community colleges, as well as updated recent activities with the Employment Development Division and Employment Training Panel, and retained the original funding allocation of $2.5 million.

The final category of the Investment Plan, Market and Program Development, we're continuing to assess the need for sustainability studies, however, we're not proposing any funding for the next fiscal year,

but this will be something that we continue to look at.

We've retained the $3 million allocations for both regional planning efforts, similar to our regional PEV planning, as well as a $3 million allocation for establishing and/or supporting Alternative Fuel and Vehicle Technology Centers.

In the Investment Plan, we have essentially zeroed out funding for Technical Assistance and Measurement Verification and Evaluation efforts, however, those aspects of the program can and will be continued to be funded by a smaller amount of funding that is provided to support the program, in general. It's separate from the Investment Plan, $100 million.

Finally, the Future Steps for this Investment Plan, obviously the May 9th Business Meeting is our big target. Once the Investment Plan is adopted, we will be looking at funding implementation. This includes completing the currently scheduled solicitations and grant agreements. We will be providing backfill and funding for existing solicitations using 2012-2013 funding where appropriate, and also where appropriate we will be issuing new solicitations, as outlined in the Investment Plan.

Looking at little further down the line, we have the next Investment Plan update for 2013-2014 and,

just so you know, we have the same deadlines, that is, a draft to the Legislature in time for the Governor's January Budget, and a final adopted version in May, but this time we will have a longer lead time than we did for the 2012-2013 Investment Plan.

The final slide is just the Funding Summary Table, as outlined in my presentation. So with that, I will turn the meeting over to Commissioner Peterman and Chairman Weisenmiller.

COMMISSIONER PETERMAN: Well, I just assume you will ask if there are any questions, or I'll let Pat take the lead on this and I'm happy to chime in, as needed.

MR. PEREZ: Good morning to all of you. I am Pat Perez, the Deputy Director for the Fuels and Transportation Division. So at this point in time, we welcome your comments.

And I think, to maybe organize and structure your comments today, and I'm addressing the much valued Advisory Committee, is that perhaps we can run through the categories up here and kind of focus our comments. And my only suggested change in terms of following that order is let's leave the Emerging Opportunities at the end of the discussion because I think that's a good segue as we move into public comment, which I know there's many parties here today that want to talk about their

individual projects which would fit under that emerging opportunities category.

COMMISSIONER PETERMAN: And I would just offer one comment before we start walking through the proposed scheduled Investment Plan. You'll note that all the numbers are firm here, except for two categories where you're still in "up to" and that's the Light-Duty PV Incentives, and the Medium- and Heavy-Duty BEV incentives. This is an area, obviously, where we've been coordinating and collaborating with ARB, as was mentioned by Charles. We're still in discussions with ARB about how much is needed, and support from the Energy Commission for those funding categories in this investment cycle. If we do not fund those categories up to the four and up to the five as noted, then we will be allocating some of that money to other categories.

We've already heard a lot of interest about what categories can use increased funding, we appreciate that, mostly you probably think all of them, a logical one, for example, however, with the HVIP program, if we do not fund up to $4 million, would be the heavy- and medium-duty demonstration category, for example. So I just wanted to highlight that, as some of you might have questions about that, but there will be firm numbers in the plan that comes out next week.

MR. PEREZ: Okay, thank you, Commissioner. And one thing I'd also like to remind parties, we have a number of outstanding solicitations that we have yet to release Notices of Proposed Awards, and therefore we cannot at this point in time discuss the merits and what's going on with those particular solicitations, for example, hydrogen, we have not yet released the Notice of Proposed Awards, so I just wanted to share that with the group.

At this point, I'm going to open it up for comments from the Advisory Committee, beginning with the Alternative Fuel Production Recommendations in the report. Mr. Carmichael.

MR. CARMICHAEL: Good morning. I actually had a -- before we get to this table, I had a clarifying question on Jim's presentation. I understand that there's a whole bunch of Notice of Proposed Awards about to come out, I also understand that there are some solicitations that still haven't been put out, but what I'm curious about is, today, are there funds from previous plans that went through a solicitation process and that are leftover, if you will, that you have not yet allocated to a new solicitation or a new investment idea? So I know we're talking about a new $100 million today, but I'm talking about money that was previously approved

that may be available, I guess.

MR. MCKINNEY: So the short answer, Tim, is there is no large pot of free money under the table that we're going to pull out at a future date. All the money has been allocated. For the '10-'11, or, actually the '09-'10 funding cycle, there is one last grant to Aemetis Biofuels for a cellulosic processor, we're finishing that up, they've got CEQA compliance, we'll get that on the June Business Meeting. For the '10-'11 category, as I tried to explain, and I apologize if it wasn't clear, some of the alternative fuel infrastructure categories were undersubscribed, so there is between $2 and $3 million there for us to reallocate. In the Program Support area, there is some leftover money there, a couple million dollars, so that's it in terms of money that has been allocated in previous Investment Plans and identified in solicitations, but not fully subscribed in a grant or an interagency agreement.

MR. CARMICHAEL: So, best case scenario, maybe $5 million?

MR. MCKINNEY: Best case. I would say closer to $4 million.

MR. CARMICHAEL: Thank you very much.

MR. PEREZ: Thank you. Eileen Tutt.

MS. TUTT: Well, actually, I'm sorry, I thought

we were already at Alt Fuel Infrastructure, but are we still on production?

MR. PEREZ: Still on Alternative Fuel Production. We'll move down the list here. So I wanted to first give everyone an opportunity to comment on that first funding category and what we're proposing. Mr. Levenson.

MR. LEVENSON: Howard Levenson from CalRecycle. First of all, I want to thank the Commission for continuing to collaborate with us and not just through this Advisory Committee, but also through our staff's involvement in some of this on the biomethane. Not surprising, I have one comment on this table, the primary comment is that we still would prefer to see a separate line item for pre-landfill biomethane production, this is a key component of our efforts at CalRecycle under a new statute, and AB 341 to get a 75 diversion from landfills on a statewide basis, and it's also a key part of our efforts under the AB 32 Scoping Plan to expand the anaerobic digestion infrastructure in the state for GHG reductions. So I understand the Energy Commission's desire to fund the highest scoring proposals in this category, as a whole, but we would still prefer to see a separate line item on that.

Just a couple of other comments that I can get

through quickly on the evaluation criteria, the way they are written up in the plan. There is a statement about biomethane production having to utilize pre-landfill waste-based sources. That's in a paragraph that describes the last solicitation, I'm sure it's the intent to continue that, but it would be good to make that more explicit in the plan and also to maybe consider some of the feedstock criteria, the scoring criteria that there be points specifically for pre-landfill waste-based sources. The other two comments that I want to make are just procedural ones. Last year in the discussions about last year's plan we talked about the idea of a two-phased proposal process, a pre-proposal idea to speed things up, and I think that's still worth having some discussions on, would make things a little easier for project proponents, and I think for everyone to help get through that process. And then -- dreams -- to have more time to review the proposals -- I keep trying. But my primary comment is about the separate line for the pre-landfill biomethane. Thank you.

MR. MCKINNEY: And Jim McKinney here, and if I could say a few words to that because I know we had a very good discussion both from yourself and then Tom Cackette of the Air Board, at the last Advisory Committee Meeting. And one of the things we're finding is that the

feedstocks available for biofuels production, advanced biofuels production in California, they're really starting to merge across lines, so there's multiple feedstocks that are going to be used for anaerobic digestion, but then also for gasification. A lot of things that we thought were only suited for cellulosic ethanol production are now available for gasification at a more cost-effective technology. So there is a lot of blurring of what used to be fairly bright lines between how a feedstock matched up with its processing technology. As those merge over, that's been the primary staff justification for putting everything in one pot. There was some concern expressed by Mr. Cackette at the last meeting that we needed to have kind of a separate line item, more precise criteria for biodiesel, so as you've seen from the notebook of the top three scoring projects were, in fact, biodiesel projects. So they won on their own merit. So, anyway, that's the staff rationale for this approach, but I appreciate your comments.

MR. PEREZ: All right, thank you, Jim. Mr. Carmichael.

MR. CARMICHAEL: Thank you. So if we could turn to page 18 and 19 of the plan, the first point on page 18 on the table 3, I just want to note that, based

on the ARB and CEC's assessment through the LCFS, landfill and dairy gas feedstocks produce compressed natural gas with a very very low GHG or carbon number. That's my set-up to page 19, the last line of the first paragraph. As you know from our written comments, as you know from testimony from Chuck White, the Natural Gas Vehicle Coalition is fully supportive of this group, this agency, prioritizing pre-landfill biomethane projects -- favoring them, giving them bonus points. What we take exception to and still want to encourage you to reconsider is the current proposal which gives the opportunity for a good landfill project to be considered in this mix. Don't change any of your criteria as far as how you evaluate these projects other than, you know, precluding landfill projects from being considered in the mix. And I've said this at the last meeting, there are only two in the state today, there are only two projects in the state today, taking landfill gas into transportation use. This is not a well developed industry, or mode of fuel development yet. CEC has supported it, but it's still very nascent. And I just want to encourage the Commission, the staff and the Commissioners, to remove that prohibition, that preclusion, and let a landfill -- if somebody puts forward a good landfill project in California, let it

compete. Thank you.

MR. PEREZ: All right, thank you, Jim. Mr. Kaffka.

MR. KAFFKA: Steve Kaffka. I want to get back to a bit of the previous discussion and Jim McKinney's and Howard's comments. I think it's important to keep in mind that, as biomass materials are assembled and then processed, a number of products can be made from them, and may well be made from them at the same facility. That would include some type of transportation liquid fuel, there may be a biogas produced, as well. So it's important, I think, in perhaps setting out a separate line for biogas that we also retain the capacity to respond to these innovative integrative biorefinery proposals that will generate numbers of products, perhaps not even just fuels, but also feedstock chemicals and other things that have significant greenhouse gas reduction potential. And I think we need to -- this program, in particular, what's great about AB 118, is that it really supports innovation, and I think it's important to keep that in mind.

MR. PEREZ: Okay, thank you. Okay, all right.

MR. SHEARS: John Shears. I just wanted to follow-up because it was near the end of Charles' presentation and then Tim sort of teed it up in terms of

just asking about the remaining balance of funding, and I just wanted to get a little more clarity in terms of how that money plus, you know, the conceptual (indiscernible) plan work to deal with the backfill issue, so if we could get a little more elaboration on how the backfilling might work, given what's in the current table plus the remaining under-funding that could be brought forward into the new cycle.

MR. MCKINNEY: So Jim McKinney here. So the notion of backfilling, or we used to call it head room, is that for solicitations where there's a heavy level of over-subscription, so many more proposals than we can fund, what we've done historically is go back through those and then use, say, future fiscal year money and fund those projects that passed and had good scores and were meritorious without releasing a new solicitation. For the current round of solicitations, for some of those, it may be appropriate, for others I think we want to look at them and make sure that the solicitation was really focused the way we intended. So, for example, with the medium- and heavy-duty advanced technology demonstrations, we opened it fairly broadly. We did not get as many awards, any goods movement drayage area, as we were anticipating, so that's one thing that we want to think about. There is some really innovative off-road

vehicles excavator hybrids in there, that caterpillar one, but for some of the rest of them. So that's the type of thought process we go through, John.

COMMISSIONER PETERMAN: And I'll just also add that we'll be looking at each solicitation independently, each one fundamentally has some head room, to see whether, as Jim pointed out, it is the solicitation the Commission would like to offer in this '12-'13 opportunity. We want to take advantage of the work that's already been done, but also not tie ourselves necessarily to those existing solicitations.

MR. PEREZ: Okay, Bonnie Gen-Holmes -- Bonnie Holmes-Gen.

MS. HOLMES-GEN: I had a couple of comments. I -- we did send a joint letter from several advisory committee members in and asked for more specificity on the evaluation criteria for this category, and I appreciate that you do have some more language in here about using the evaluation criteria from the solicitation, but I think it would be helpful to have a little more -- a clearer idea of what level of greenhouse gas reduction that we're trying to achieve from this category and more clearly how it ties up to our long term goals to reach our 2050 greenhouse gas reduction goals. It would be helpful to have a little more clarity about

that. And then, there is some discussion about the category -- about the types of vehicles -- the types of, I guess, categories where we're using these fuels, and I do think that it would be helpful to do anything we can to try to encourage applications from the heavy-duty sector. And it does seem that this is an area where we really need to have these kinds of innovative advanced biofuels used and there are limited options, and so I just would love to hear more discussion about how we can encourage projects within those categories -- heavy-duty trucking, aviation, shipping, those heavy-duty categories.

MR. PEREZ: Okay, thank you. I would also like to reach out to members who may be participating via Webcast -- oh, we do, okay, thank you.

MR. MUI: Simon Mui. First off, thank you, Commissioners, and especially staff, on the hard work here, and providing some updates here, as well as I think the snapshot of the solicitation updates is really helpful, to know which areas are over-subscribed. I'd like to see that, actually, in a table, kind of line-by-line, it might be a good way to show and demonstrate how the shifts in funds -- the rationale behind that.

Just in terms of alternative fuels production, just also following up on some of Bonnie's comments, I

think a couple of areas -- certainly supportive of the opening up the aviation, I think that makes a lot of sense, particularly since a lot of the advanced biofuels interest, potential buyers in the aviation sector, so I think that's a good move on the part of CEC to start looking at other sectors, as well -- in addition to the light-duty side. I'll mention, you know, Sustainable Aviation Users Group forums, there's a number of different forums going on, as well as the linkages to DOD, Air Force interests, as well, in advanced biofuels, which I know you are familiar with.

One area, I think, as you were talking about, Jim, jostled my mind in terms of the focus on new technologies that are sort of feedstock neutral, that can take a lot of different feedstocks, I think that's a ripe area, particularly with the remaining sustainability funding, to kind of start focusing efforts around feedstocks, you know, making sure as we have the technology deployed that the right feedstocks are there, that there is some support for those types of feedstocks that we want to see, longer term that we all understand is more sustainable, and I think a lot of this work, for instance, the roundtable and sustainable biofuels just completed, it was just finished, so global group of stakeholders basically agreeing on sustainability

indicators, standards. Those are ways to, I think, bridge this gap between, you know, that feedstock question. I think the technology is there, but more emphasis maybe on the feedstock side. And that's in the letter we've sent, together with some of the other environmental groups here.

And finally, I think it's important to look to the demand side, the focus on fleets as potential buyers, and ways to basically link both the suppliers, as well as the buyers there. I think that effort -- things that could be, you know, leverage in terms of things like a spec standard, a specification standard for government agencies to purchase fuels that could be used by other agencies. Those may be kind of low hanging fruit that could have some bigger impact in terms of the amount of funding that goes to that, in terms of leveraging the dollars here. So, thank you.

COMMISSIONER PETERMAN: Commissioner Peterman. I'd just like to follow-up for a second on Simon's comment about aviation. Omissions from aviation is something that we are concerned with and we're looking at, and we've seen consumption of aviation in California, you know, increasing two to three percent a year. One of the challenges, one of the considerations, if you will, however, is that the funding is collected from Vehicle

Registration, Smog Check, and Voter Registration, and so again being cognizant that we're not getting money from activities associated with aviation, and that the state has little authority over aviation, and we're trying to figure out how at all we can address it with this plan. But I appreciate your concerns.

MR. MUI: And we're willing to meet with you individually to talk about that.

MR. PEREZ: Okay. We'll turn it back to Mr. Carmichael.

MR. CARMICHAEL: I was waiting for Commissioner Peterman to propose a $.25 per passenger fee, which we discussed with this agency a few years ago, actually, because --

COMMISSIONER PETERMAN: I've got a flight this afternoon, so after that, how about that?

MR. CARMICHAEL: -- a very small fee that could go a long ways. Two things, Simon's comments reminded me -- I should have started with complimenting the staff, I really think you did a great job on this revision update, and I've got to assume it's because it was just an update, you had so much time to think about it and actually work on the details. But, no, seriously I think it reads really well, I think it's clearer than some of the plans in the past, and that's all moving in the right

direction. I neglected to say a moment ago -- and taking off my natural gas vehicle advocate hat -- that one of the issues that this agency needs to think more about and in the context of this plan is ethanol production. It is not the most popular topic in Sacramento. But, unless you believe that we're not going to continue to use ethanol in the foreseeable future, as blended into gasoline or used as E85, we need to take a serious look at where that ethanol is coming from, and right now there's a lot of conversation about it coming from not very good sources in the Midwest, not good in their carbon intensity, and a lot of discussion about importing it from Brazil. I don't think either of those scenarios are as good as supporting production here in the state. And I think that is something that we need to talk more about as a committee, as a state, and you know, this is on my radar screen because I got a letter overnight from some of the proponents for this, but it's something that I've spoken to in the past because I think, if we agree ethanol is going to be a part of the mix, why wouldn't we support producing the lowest carbon version that we can here in California? That, to me, is a logical way for us to go.

COMMISSIONER PETERMAN: I'll just say, just one point on that topic, as we looked at all the resources and opportunities, one of the things that's important to

the Commission, and personally to me, is investing in opportunities that we see a pathway to self-sustainment, and so we welcome your thoughts about that issue related to ethanol, and based on our discussion we had in the last Investment Plan about not adding money into the CFIP program for the last plan, that was one of the key rationales.

MR. KAFFKA: This is Steve Kaffka. I just want to say amen again. I think that's a great comment. To the degree that we can find improvement in sustainable pathways in California, we're ahead all the way. But that's not the main reason I wanted to make a comment. I wanted to make a comment about the aviation fuel issue. As industries build out, they can be both competitive, but also complementary. I mean, the capacity to make -- if you can generate or assemble biomass in an effective way, in ways that we agree are sustainable, and then transform them into various products, one of those products at one moment might be aviation fuel, and another might be a transportation fuel. But in any case, the overall capacity, the expansion of the capacity, I would argue, at least intuitively, would tend to be beneficial for all types of fuels and products from biomass. So there's complementarities between the development of biomass pathways for aviation fuels and

for transportation fuels.

COMMISSIONER PETERMAN: I want to hear from the phones first. Let's hear from anyone we haven't heard from yet on the Advisory Panel.

MR. PEREZ: I understand, Mr. Coleman, you're out there. Would you like to speak?

MR. COLEMAN: Yeah, sure. So, it sounds like we're still focused on the infrastructure segment. Is that right?

MR. PEREZ: Fuel production, yeah.

MR. COLEMAN: Oh, fuel structure, okay. So mostly I have several comments on the infrastructure side, so I can hold until we get to that.

MR. PEREZ: Okay, we'll be there in a few minutes. Anybody else online who would like to comment on overall alternative fuel production, funding allocations or issues, concerns, recommendations? Members, please.

MR. SMITH: If I may, this is Charles Smith. Just so everyone knows, Steve Ellis, who is sitting in for Justin Ward on the Advisory Committee, is also on WebEx.

MR. PEREZ: Okay, thank you. I'd just like to remind everybody who is online from the general public that we will be getting to your input and comments later

in this meeting, so thank you for your patience and standing by. So with that -- Tyson.

MR. ECKERLE: Yeah, thank you. I just wanted to commend the staff and every -- a great job on the investment plan and also agree on some of the comments that have been made by the Advisory members already. And so Tim Olson's -- Tim Carmichael's -- sorry -- comment about landfill gas being able to compete in this pool, I think, is a very -- I agree with that, as well. This competing on its own merits maybe it might make sense not to select those projects, but I think it's good to at least keep the option open.

Then, also, I just wanted to follow-up on Bonnie's comment as far as defining the criteria for greenhouse gas emissions, and also figuring out a way to make sure that these biofuels do fit into our long term 2050 climate goals and maybe directing some of those towards the heavy-duty sector. So, thank you.

COMMISSIONER PETERMAN: I wanted to make one comment about the greenhouse gases. So we put out the first report on the program -- when was that -- last fall. And so -- and we really welcome feedback about, again, how to quantify, assess some of these benefits. So if you all haven't had a chance to look at it, please take a look at that benefits report, particularly if

you're interested in some of the greenhouse gas measurement, and offer us your feedback. So this is a work in progress for us, as well, so I appreciate that comment.

MR. PEREZ: Okay, I'll turn it over to Mr. Levenson.

MR. LEVENSON: Another comment on the landfill issue, if you don't mind. There's over a billion tons of waste in place at landfills, so gas is being produced and certainly CalRecycle has supported projects in the past for capturing that and turning that into fuel. I'd also just like to -- most of those landfills are pretty profitable and the situation that we have with the anaerobic digestion facilities, in particular, is that they're having to compete with cheap landfill tipping fees, and so, in our view, funding investment in that sort of middle term, or medium term, infrastructure is more critical than funding the landfill gas projects, though we certainly don't want to preclude that, it's just that we think there should be a separate allocation to those anaerobic digestion-type projects. Thanks.

MR. PEREZ: Thank you, Howard. Okay, I think at this point we're going to go ahead and move on to the next funding category, which includes Alternative Fuel Infrastructure. So with that, we'll take comments and

input on that funding category. Mr. Levenson, do you want to begin? Okay, I saw your request to speak.

MR. LEVENSON: Oh, sorry.

MR. PEREZ: Eileen Tutt.

MS. TUTT: Thank you. Eileen Tutt with Cal ETC. I just want to say a couple things here. One is that, when I look at this and I look at the way the money is allocated, usually the way the money is allocated does reflect some sort of priority, and although I am extremely supportive of hydrogen fueling infrastructure, very very supportive, I just want to say that electric charging infrastructure is burgeoning right now and I feel -- I want to commend the staff on the work in this report, I think it's very well done. The only problem is that you didn't incorporate any of my comments. Now, I'm going to say, I take personal responsibility for that because I should have come and met with you personally, and I've been meaning to do it, and I've just been traveling a lot, to be honest. But anyway, I want to make this final plea because you have less than a week. We need more than $7.5 million for charging infrastructure. And the reason is that I've been out and about a lot lately, but the workplace charging and MUD issues are just very complicated, and they are -- and I was a little concerned in the report with, you know, the

NRG settlement being reflected in the report, although I think it's fine, I'm not making a statement, good or bad, about the NRG settlement, but that settlement benefits one company and they install their own chargers, and they are a subscription-based model, NRG, as are many of the third-party or EVSPs. So many folks, especially workplace charging and MUDs just may not want to take up that particular offer, so I'm not criticizing that business model, I'm just suggesting that that is not necessarily viable for many of the other workplace and MUD chargers, or charging situations. So I'd like -- so I don't think that you can assume that that will help move the needle on infrastructure charging just because it does really benefit only one company. And in my working not only out in the external world, but even I Government in the administration lately, a lot of the workplace and MUD charging, they're really looking at Level 1 infrastructure, or Level 2, that isn't subscription-based. So this is going to -- this is a huge challenge, and even I was at a conference yesterday and they were saying that, you know, a lot of people can't charge at home, so they will be charging at work, or they can't charge at home with a Level 2, they need Level 1. So we do need to equalize this number and I put in my written comments where I would take the money, and

I'm not going to say that out loud here, but I do think, you know, there needs to be a little bit more equality here just because, although I'm wildly supportive of hydrogen, the vehicles aren't out there in anywhere near the numbers of electric vehicles, and there's many more coming to market. So we just need to move more money to electric vehicle charging. And I do want to note Jim Boyd, our Chairman of the PEV Collaborative, in the PEV Collaborative, we recently decided that we have to focus on MUD and workplace charging because there's such big challenges, and part of that is going to be needing resources at the workplace and for apartment complexes and condos and other multi-unit dwelling situations. So thank you. I really really hope that we can move that number up a little bit.

COMMISSIONER PETERMAN: This is Commissioner Peterman. Eileen, thank you for your comments. I'll just say a word or two about the NRG settlement. Unless you were a party to that settlement, we haven't seen the terms of the settlement until they'll be filed with FERC, and so I think that will illuminate for everyone more some of the terms. I can say generally that, from what I understand, the intent is to have the roll-out of those chargers to allow for broad access, multiple charging type of infrastructure, not only the CHAdeMO structure,

not only the CHAdeMO, for example. And so I think that it will benefit EV drivers and others in the industry, in addition to NRG, and I think that is the intent of it. And so, looking forward to that, I think that money will benefit the industry and what we're trying to do with this plan is we're continuing funding, obviously, in the category, as you see, and looking to see what happens in the next 18 month with their roll-out. Also, the roll-out of the NRG stations is meant to be fast and so we're not precluding further funding in this area, but I think it's incorrect to say that it's not necessarily going to help all others in the industry. I think we have to wait and see in the next month when it's filed. But I also appreciate your concerns. Eileen is giving me the look, but….

MR. PEREZ: And let me just follow, one thing that would also be very helpful to us at the staff level and I want to encourage you not to be shy, and this doesn't apply to Eileen, but all of you with respect to your recommendations on increasing funding levels for these particular categories, if you could give us an idea what you're talking about and, more importantly, not to put you on the spot, but where would you cut funding in your colleague's call on CR2 categories, and I don't want to create too much of a challenge here for you, but if

you could provide some specific recommendations, that would be very helpful, too, because I think -- I just have a feeling that every one of you would like more funding in your category, I'm just taking a wild guess here. But give us the level of funding you'd like and any suggestions on areas that we might defer funding and support down the road, that would be helpful, too. So, thanks so much. John Shears.

MR. SHEARS: Yeah, so in our comments we also acknowledge the NRG settlement and recognize that that put the Energy Commission sort of in this situation of trying to figure out how to contextualize the AB 118 funding and, given we're still all trying to figure out what the shape of the NRG settlement is going to be about, I'm actually very involved in trying to help because I know there's a lot of concern and, in some cases, confusion about the settlement and, you know -- full disclosure -- NRG is an affiliate of CEERT, so we're trying to help on the outreach and trying to organize meetings, so actually I was exchanging emails with some of the folks at NRG as I was sitting here this morning, but --

COMMISSIONER PETERMAN: If you can provide more information, that's great.

MR. SHEARS: Well, I can also -- I think it

would probably be good to, maybe before the next draft, see if we can get NRG to come in and see if they have time to meet because I was a bit confused because there is a mention in this draft update, and I just also have been remiss in congratulating staff and the Commission, again, this -- the first draft was so well done that there was just basically polishing and obviously some budgetary adjustments that were required to make this newest draft. So, you know, I'll suggest and see if we can arrange some meetings because I know you're on a really really tight deadline, as are the negotiations.

COMMISSIONER PETERMAN: And I would say, as part of that, more so it's important if you have any exact corrections to the text as it is because we will be having ongoing meetings, our staff is starting to engage with NRG to make sure we're collaborating well, so I want to make sure this document reflects the latest. But -- so don't feel the urgency to have a meeting in four days, but --

MR. SHEARS: Right. Because, yeah, there is a mention that the CEC will be coordinating, and I wasn't quite sure how it gelled, the coordination, between what's going on during -- with the settlement negotiations and the Energy Commission's involvement in that. It seemed kind of very -- maybe it's more hopeful

than --

COMMISSIONER PETERMAN: It's expecting.

MR. SHEARS: Expecting, okay. So on that note, you know, we very much respect, while at the time we're a big supporter of plug-ins.

CHAIR WEISENMILLER: Okay, but I think the issue which certainly Eileen raised, and I don't know if you're too familiar, if you can speak to it, or anyone else in the room or on the line, is just obviously we were pulling the plan together, the settlement came in, and gave context. So part of it is trying to figure out what that means. I think at the earlier meeting, you know, if we had said we were getting the chargers, I think Eileen would have been, you know, dancing down the hall. But now that we have this number about 100 million, it's like how do we make sure that our money really complements that --

MR. SHEAR: Right. Just to be clear, we are not NRG, we are not involved in the settlement. We found out about the settlement the way everyone else found out about it, so we're just trying to help, you know, identify people that NRG should be talking with. So we're trying to help contextualize, to figure it out ourselves.

COMMISSIONER PETERMAN: And also we are in

conversations -- we have talked with CPUC that is involved in that settlement --

MR. SHEARS: As have we.

COMMISSIONER PETERMAN: -- and Nancy Ryan, so we're engaged on it.

MR. SHEARS: Okay. So on that, I'm with you on that, Eileen, I just think we're all trying to figure out exactly what the shape is and the devil is in the details on the settlement, and what that means for the other (inaudible).

COMMISSIONER PETERMAN: But I also want to say -- Commissioner Peterman here -- that, Eileen, regarding your comments about workplace charging, MUD, incredibly important areas to us, something we're trying to think about going forward with the solicitations, definitely an untapped area.

MR. SHEARS: We also highlighted that in our written -- joint written comments, so -- and then on the hydrogen side, you know, haven't changed our position from the last Advisory Committee meeting. We do support the $11 million. We noticed that, in this draft, how the funding for the hydrogen is dispensed has been opened up to operations and maintenance costs, would like -- and, you know, it's been proposed to cap it. We're still doing -- the stakeholders that are involved, you know, in

mapping out the strategy for the deployments through 2017, we're still trying to work out, you know, what the likely scenarios are for how the industry is going to evolve in this, and while we're supportive of the idea of trying to cap it, we'd like the idea to be more systemic rather than station specific since some proprietors might just want to have upfront capital and not worry about the O&M, whereas other proprietors might prefer to go more towards the cash flow model. So we think it might be good just to develop that a little further with the Energy Commission staff. And that's all I have to say on those items for now, thanks.

MR. PEREZ: Thank you, John. I'll turn it over to Mr. White.

MR. WHITE: Thank you, Pat. Erik White with the Air Resources Board. First, I want to thank CEC staff for working with ARB on the development of the plan. I think it complements well with the various programs we have at ARB on the motor vehicle side, as well as our element of the AB 118 program and the AQIP Program. I just wanted to touch real briefly on two topics, certainly we support continued investment in electric charging infrastructure and I think Eileen raised this in a couple areas where we need to continue to look at that in terms of workplace charging and

municipal utilities, those service areas, where there is a need.

I also want to thank CEC staff for their continued investment on the hydrogen fueling infrastructure. We've worked very closely with you to ensure that this next round of funding will be adequate to ensure the continued growth of that infrastructure in California to support what is -- what we see as these vehicles coming, and the fuel cell vehicles are coming to California, we've had a lot of conversations with automakers, so this investment is absolutely critical for the deployment of these vehicles into the state, so we thank you and certainly support the levels that you've identified in the plan.

MR. PEREZ: Thank you, Erik. Eileen. Okay, Bonnie.

MS. HOLMES-GEN: Thank you. Yes, I wanted to make sure that I communicate our support, both for the hydrogen funding, we do continue to think it's very important to prepare for hydrogen vehicles that are coming out. And we do want to make sure that -- and I know this is definitely planned to be for stations that are above and beyond what is required by the ARB Clean Fuels Outlet Regulation -- but I just want to make sure that's really clarified in the report, and that's very

clear criteria. And in terms of the EV charging, you know, we just think it's a critically important time to be supporting plug-in vehicles, and I support Eileen's comments and the comments that have been made about the need for additional funding, increased focus on workplace charging, everything we can do right now to help support this roll-out of electric vehicles and working with local government partners to make this happen as smoothly as possible. So I think there's probably a need for some more discussion, as we've said, about how this investment is going to work together with the NRG settlement.

And I just wanted to make a broader comment that I think applies to all the categories in talking about where we are heading with this whole program. I've been really excited lately to learn about some work that's going on at the State Air Board, I think it's called the Visioning Process, maybe Erik can give me the exact name, and I'm pretty sure that you're aware of this also, but there's an effort that's begun to take a more comprehensive look at what do we need not only to reach our State and Federal air quality goals, but of course to reach our greenhouse gas goals, and this is a broad look at what we need to do in the light-duty, heavy-duty, you know, all sectors, and what are the specific amounts of vehicles and alternative -- you know, clean alternative

fuels that we need. And I know that the CEC has done some of this work, and I appreciate that, it's been incredibly helpful, but I think we do need to continue to have a broader and longer look at what's needed and in coordination with sister agencies. So I've been excited to hear what's going on at the Air Board, I think it's still in the initial phase, but I think that should be definitely referenced in the Investment Plan and this should be more of a topic for discussion as we move forward to the next Investment Plan to make sure that we're coordinating, we're well coordinated with that effort, and building in some of the numbers that we'll be getting about what we need to achieve in the 2020, 2030 time frame, and how that fits with the investments that we're making. So I wanted to put that out there. You know, again, I've just been getting a little bit briefed on this over the past few weeks, I know it's a new process, but I think it will be really valuable for CEC and ARB to work together and pull that into this process.

COMMISSIONER PETERMAN: This is Commissioner Peterman. Bonnie, I'll just add in terms of contextual -- how we conceptualize our hydrogen infrastructure funding vis a vis CFO is a transition to the CFO opportunities, so somewhat above and beyond, but really in advance of because that won't trigger until 10,000

vehicles, and there's other conditions, and so just wanted to clarify that.

MR. PEREZ: Okay, Jan Sharpless.

MS. SHARPLESS: I think Commissioner Peterman sort of touched on what I was thinking about how the two -- the new Air Board Regulation for outlets and the funding in this category are going to dovetail. But can you give me sort of a general idea of how many stations, hydrogen stations, the aggregate amount of money in this program would actually develop? How many stations are we talking about?

MR. OLSON: This is Tim Olson, Advisor to Commissioner Peterman. And maybe, Tyson, do you have comments to share with us? So when you look at what we've funded in the past, in addition to the ARB projects in the -- like going back five years ago -- through this plan with the $11 million, we think we're going to be around 34 or 35 stations, three major clusters in Southern California, San Francisco, one station in Sacramento. Looking at the roll-out of vehicles by 2015, 2017 timeframe, where automakers are making commitments at around 50,000 vehicles, we're going to need probably 68 stations. This comes from a lot of analysis from the collaborative of lots of different players here, backed up with analysis from U.C. Irvine, U.C. Davis, and that

68 stations will -- we think they're going to average in the $1.5 to $2 million per station, this is the early roll-out. And we think that will lead to the point of the CFO trigger in that timeframe, and that there are financial investment viewpoints, viewpoints from financial investors that they think that capital investment could be covered with non-Government funding. That assumption is that O&M costs, throughput on fuel delivered to vehicles, is going to be kind of a stagger into that timeframe, which may require some investment, some Government incentive.

COMMISSIONER PETERMAN: I'll also add that the industry's proposal, or need for 68 stations, reflects a need for coverage, in particular, and each of those stations will have potential for additional capacity as we see a ramp-up in fuel cell vehicles, but having that footprint is what's been desired.

MS. SHARPLESS: Okay. So, you were asking a question, if you were to move the funding around, where you would take it. I guess my question went to sort of the risk; if you were to reduce that amount from the hydrogen fuel category, then you would increase the risk of not meeting the needed requirement in reduction of vehicles and to meet the -- in other words, you would be leaving a gap.

COMMISSIONER PETERMAN: Yeah, and there's not -- I believe there's not a proposal to reduce that funding category.

MS. SHARPLESS: No, no, no, no, there's no proposal, but the tradeoffs. You're looking at tradeoffs. There's been some suggestion that, you know, EVs need more --

COMMISSIONER PETERMAN: I see what you're saying, okay.

MS. SHARPLESS: -- infrastructure money. Okay, where do you take it?

COMMISSIONER PETERMAN: Right. Okay, thank you.

MR. PEREZ: Okay, Eileen.

MS. TUTT: Thanks. Eileen from Cal ETC. Just to be really clear, in our written comments we didn't take money from hydrogen where we think it needs to go. What we suggested, and I'm going to take up Pat's challenge, even though I swear to God, I'm probably going to be shot after this meeting, we did suggest that additional $2.5 million come from biomethane and gasoline substitutes production. And not that we don't think that $20 million in alternative fuel production is important, we do, Again, I look at that whole budget as a reflection of priorities. I look at the landscape out

there -- where are we with the different technologies? Clearly, electric vehicles are here now, they're going to be huge -- every auto manufacturer has announced many of them are coming out this year, we have to be supporting this -- it has to be reflected in the budget that we wildly support electric charging infrastructure because that is clearly one of the market barriers. So I just -- what I wanted to do is bring the money up to a $11 million so you still had a big chunk going to biofuel, which I think is a priority of the State, but clearly electric vehicles -- it almost looks like hydrogen is a greater priority, and I understand the stations are more expensive and all of that, but -- and I don't want to take any money from hydrogen, but I did want to move that $2.5 million.

And in the NRG discussion -- sorry to give you the look, Commissioner Peterman -- but I just want to encourage you to work not just with NRG, but with the other EVSPs, with us, with the utilities, because the truth is that the NRG settlement, they did work behind closed doors for good reasons, it was a legal settlement, with the PUC and they're working with you, but the others, it does feel a little bit like they're shut out. And so I think it's going to be really important to have open door, honest conversations, you probably did see the

resolution out of the Assembly, there's just a lot of uncertainty about what this means. And I have had a number of conversations with the PUC, and with NRG, and with the other EVSPs, and with the utilities, and there's no -- nobody is like opposed necessarily, but they are concerned about the direction that it looks like it's going, so just talk to all of us is what I would say.

COMMISSIONER PETERMAN: And I -- this is Commissioner Peterman -- Eileen, your comments are well received and the Energy Commission has been the primary funder of electric vehicle charging prior to the settlement, and we've invested a lot of time, effort and learned a lot in our process, and particularly as we're especially working on the PEV readiness plans. So I think we're actually a good venue for working with all of these stakeholders because we have been working with the diversity, and that's why, even when the settlement came up right at the time of putting out the Investment Plan, even though some may call for putting a zero in our plan to wait out and see what happens with the settlement, we were committed to not doing that because we wanted to maintain a pot of funding that we could do solicitations with, and address some of these concerns. So, duly noted.

MR. PEREZ: Thank you, Eileen. Mr. Eckerle.

MR. ECKERLE: Well, thank you, it's been a very interesting discussion to listen to and I agree with all the stakeholders, I think that zero emission vehicles right now, I mean, it really is a critical turning point and sending that signal that California is serious about hydrogen and battery electric and plug-in vehicles is incredibly critical. And so I think the Energy Commission has taken a smart track by, you know, monitoring the NRG settlement, and I think Eileen has brought some really great points to bear that I hadn't even though about, and so I think it is critical to make sure we get other people into the marketplace, as well.

On the hydrogen side, I think the $11 million is absolutely critical to maintain and, as Tim said, you know, getting up to that 68 station number is critical. And one of the -- just to provide a little bit of context because I've done some analysis behind this, is that 68 station number is kind of, like Commissioner Peterman said, a coverage number. And so that basically gives the automakers the opportunity to sell the car and the consumer has the similar benefit to driving the gasoline vehicle in those cluster areas, which is a critical distinction as far as, you know, to grow the market.

But in terms of the overlap with the Clean Fuels Outlet, if you overlay the likely station capacity

sizes, that 68 stations actually covers about 20,000 vehicles, which is the trigger for the Clean Fuels Outlet to pitch in statewide, so that's kind of another backing for that number and why we need to keep funding to get to that.

MR. PEREZ: Thank you, Tyson, we have two committee members on the phone that would like to speak right now. Let's begin with Steve Ellis.

MR. ELLIS: Good morning. Can you hear me okay?

MR. PEREZ: Yes, we can.

MR. ELLIS: Okay, good. So Steve Ellis with American Honda. Actually, I'm sitting in as an advisory member for Justin Ward with the California Fuel Cell Partnership. So, first of all, I would like to say thanks to the CEC staff for continued dedication to this proposal of the Investment Plan. It's really, I think, been a continuum of improvements and my observations follow-up directly over the last few years. It's clear throughout the document that CEC is committed to see reduction of greenhouse gas in California and promotion of advanced powertrains and fuels. Specifically talking about hydrogen, the Partnership would like to express support for the funding allocation and through this continuation, funding will be able to maintain growth of

hydrogen stations towards this goal of 68 that was mentioned earlier, by the end of 2015. But we do still have a ways to go before we can realize the 68 stations. But I think that through this Investment Plan, we definitely will be one step closer, so appreciate the opportunity to speak today and make these comments.

MR. PEREZ: Thank you, Mr. Ellis. Moving on to Mr. Coleman, are you there?

MR. COLEMAN: Yeah, thanks. So you had requested that we suggest cuts and I might take the risk of stirring the pot a little bit.

MR. PEREZ: It's always easy to do from a distance.

MR. COLEMAN: Yeah, exactly, I can't see everyone's face, so I'm well aware of what their looks are right now, but -- you know, I can appreciate, I think one of the things we all sort of appreciated is the challenge and complexity of putting this together over time, you know, it's a multi-varied problem, you know, you're trying to figure out an optimization between the availability and readiness of these technologies and fuels, and meeting them with the vehicle side, and the impact they're going to have, so I think, you know, the context in my mind is that I appreciate that complexity. I think I agree with the sentiment of Eileen's concern

early on, if not with the proposed solution, which is that, if you do look at those fuel -- the infrastructure allocations, it certainly pops out that hydrogen is the top priority, and I can appreciate that that is an ARB priority through the CFO program and others. I'm not so certain why it's such a priority here in this program. And so, from the report, it seems to be that it's the most expensive and least ready and least reflective of the current market forces of all the other infrastructure solutions. And so I may be missing something in that regard, but I think it would help to justify each of these technologies based on more of an apples to apples comparison, and this is where I sound a little bit like a broken record because I bring this up every time, and I appreciate that there's now a Benefits Report, which I think is a very useful thing, but you know, when I read through the report I'm trying to understand the justification for each of these categories, and it's actually hard to tell because, when I look at the hydrogen component I see, you know, it's about $1.3 to $2 million per station; you know, when I look at E85, it's anywhere from the average on the report is about $300K, although it's cited as $50 to $200, and the average for natural gas is somewhere around $250K. So you sort of see a Delta there. It's not clear to me how many miles

are being serviced, how much greenhouse reduction potential is being offered by each of those stations. And I guess what I would offer is that I think it's important to bring hydrogen back under the umbrella, if you will, and put all of the infrastructure opportunities, or alternatives, side-by-side because it feels like hydrogen has just been considered separately. And let's see how those things stack up. And, you know, I'm not necessarily suggesting that you should be cutting the hydrogen numbers, although my gut says in looking at this that it seems like the outlier, but it does seem like we need a little bit better understanding. If this is the evaluation that has been done, we need a better understanding of how you're stack ranking those things.

And you know, to Commissioner Peterman's point about the need in this space, and I think a number of other people have mentioned it, the need of getting to 68 stations, you know, I think there's a whole lot of needs out there in these marketplaces that we see on a daily basis, but it seems like the justification here is that, because the need is so large, the Government should therefore go and deploy those dollars. My concern is that we're out ahead of this trend significantly, and that the number of vehicles in the roads sort of attest to that, which is 350, I think, in 2011, you know, vs.

say 450,000 for E85 vehicles out there. You know, there's not a critical mass yet, and there hasn't been for a long time, and I understand that there's a chicken and egg challenge here, but the lack of co-investment from the private market on this one makes me extremely nervous. And it was even cited in the report that one of the things that needed to happen, and I think three of the stations being funded were for upgrades from prior technologies, but these were outdated technologies, they were stations that were put in ahead of the -- you know, ahead of the trend. And you know, as a result, they were stranded. So, you know, I think we just have to think more carefully about -- or, not more carefully -- I think we have to think very carefully about whether or not, because the list is needed, that this is the program that should be doing it, and whether it's the best allocation of those dollars in the context of a very limited amount of dollars, and how much co-investment from the private industry is required because, from what I read in the report, it's both capital costs, O&M, and so on and so forth, that's being funded in hydrogen, whereas a lot of these other stations, you're not having to put in that kind of dollars to support the program.

So I guess I would ask, you know, if somebody could talk a little bit about those comparative benefits

on an apples to apples basis and how the -- what the logic is there, and how we should be thinking about the timing of this program, and what kind of commitments we actually have from the vehicle manufacturers, because I understand there are commitments made inside of the CFO program, but for these early stages, what are the commitments that we're actually going to see, the early vehicle deployment, if we deploy these stations?

COMMISSIONER PETERMAN: Hi, Will, this is Commissioner Peterman. I just want to offer a comment and then I would ask staff or perhaps even Tyson, who has been working doing some analysis looking at hydrogen infrastructure, to comment. It is not my view, and I would caution against the presentation of what we do as stack ranking because it's not stack ranking. Fundamentally, we're trying to look at each resource and technology, see what the needs are for that, and then acknowledging that everyone has got more needs than you can meet with a $100 million pot of money, adjusting accordingly. And so everything is not going to have the same dollar amount on it, and I'm sorry if that's how the document is read, I think we try to be very clear about a diversified portfolio, etc., but that is not what we do is necessarily apples to apples, this is looking within a fuel, within a technology resource, looking at the

opportunities, and of course there is sometimes some comparison, but that's not how the approach is done.

And also, I would say I hear your concerns about whether the -- what will be the realized cars in development and, frankly, this is something that you have across all technologies -- electric vehicles, as well. I mean, just within this year, looking at forecasts for electric vehicles, we've had quite a range between the OEM projections and consumer preference, and so I would caution about requiring over-certainty for any vehicle types since we don't have it for any. That being said, I think we have received information that gives us more comfort that the projections from the OEMs, in terms of Fuel Cell Vehicles, are more likely than they were in the past. And, you know, I came into this job last year, you know, coming out of frankly a place of hearing about the hydrogen highway as something that would happen in the future. Based on what I've learned over the last year, I have more comfort that we've moved in that model, that we are now not past the highway idea in looking at these cluster opportunities, and that there is exactly more of a near term opportunity than there used to be. Again, I am not recommending we preference any of these over another, but I think we've got to, at least with fuel cell vehicles and hydrogen, look at where things are now

vs. where they were where the dialogue was a couple years ago. So those are my two cents, and I would welcome any other factual input from someone else.

MR. SHEARS: This is John Shears and, first, I want to just clarify, this is not ARB's pet project. I just want to clarify, this is State policy, ARB is the resident agency that has the regulatory authority given to it by the Legislature. This goes back to 1990, the California Clean Air Act into 2006 with AB 32, there's been huge amounts of research done on this, California, U.S., Europe, looking at transportation's role in meeting greenhouse gas compliance for 2020, 2050. All the work shows that advances in hydrogen fuel cell vehicles are critical technologies. We haven't talked about, you know, a lot of the funding that's being discussed right now in the AB 118 (inaudible) passenger vehicles, but we can get into a discussion about the role for batteries which, you know, there are rules on the heavy- and medium-duty side, but (inaudible) transport, as we're moving forward in the coming decades, you know, fuel cells will probably have very -- an increasing role in long range transport on road and off road. So there's that.

The other aspect of this is that there have been huge amounts of funding federally for plug-ins.

That has not been the case for infrastructure, federally. Right now, DOE has not for a long time funded infrastructure for hydrogen outside of research and demonstration. And just to clarify the upgrades for those few stations that were mentioned, those stations were, in fact, originally deployed as demonstration and research stations. They were never deployed as retail stations, so I just want to clarify because, you know, a lot of confusion and I think a lot of sort of the tarnish that is based on hydrogen because of the older stations, is people, whenever they hear about them, they assume that those were meant to be retail and that they failed, and that's why they need to be upgraded or shut down. It was always intended that some of those stations would probably shut down once they had, you know, their use in research had expired. So I just want to clarify on that.

And finally, I want to also back up, Commissioner Peterman, and we're all -- many of us in this room are working mightily, both electric drive and hydrogen, both vehicle technologies hold a lot of promise, but they also come with huge amounts of risk. The auto manufacturers are coming forward with a large number of vehicle models. That does not mean, even if the infrastructure is there, that the market, consumers, will be accepting of those vehicles. So we should not

trap ourselves into the tautology that, because there's a lot of funding, that means the market will succeed, and because OEMs are putting out a lot of vehicles that means there will be a lot of sales of vehicles. We're entering a very (inaudible), as Eileen mentioned, this next 12 to 18 months we're anticipating (inaudible) to maybe even 20 by the end of that window, and new models of passenger vehicles, and we'll have to see, you know, whether the consumers really are accepting of those vehicles. So we're heading into an important test period for plug-in vehicles.

In terms of hydrogen, what we're about, and this is the role of Government, is helping to bridge the risk and to build a market until the investor community can potentially take over. So, getting to 68 stations actually within the clusters also gets us -- helps get the fleet numbers up to numbers where, potentially, with a little more infrastructure, there could be a self-sustaining market within those cluster markets for hydrogen fueling that might not even require any further government support. So we're also working, when we're all working around the strategy around hydrogen, to get hydrogen and fuel cell vehicles off the Government dole as soon as possible and so we're looking about how all these numbers are reflecting how to build a self-

sustaining market around hydrogen.

MR. COLEMAN: Can I jump in and just clarify one comment, which is that, in terms of the apples to apples comment and in terms of the sort of role here of this program, you know, I think, John, you just mentioned that the role of Government is to jump start these markets. I don't necessarily agree with that. I think that it's to jump start these markets where there is a significant public benefit for doing so. And, you know, I agree with your statement that a lot of the long term forecasting has suggested that hydrogen is likely to be a component of that solution to the degree that we can get to where people want to get to in terms of where the hydrogen comes from, 1), and 2) the kind of deployment that people are talking about and that other technologies don't surpass hydrogen, but that's also a long way off. And I guess what I would argue is that, when we need to look at how to allocate these dollars at these different types of technologies, the issue is what the public benefit is, and therefore that then gets back to the apples to apples comparison. So, Commissioner Peterman, I understand that there is a lot of considerations, I think that's how I caveated my comments to start with, around whether or not -- you know, which of these technologies should be deployed when, and that a lot of

those considerations are not necessarily just greenhouse gas reductions but their readiness and where the market is, and whatnot. I think that is an important consideration, particularly in this case, on both sides of the ledger. But I also think that we need to make sure that, for these limited dollars, we are deploying towards the highest public benefit which, in this case, the priority of the program is the largest carbon reductions for the least amount of dollars. And so, to the degree that we're meeting that charge, then great. And if that's the case, then great. But I'd love to see that justification in the report and understand that that's actually what we're doing in this case.

COMMISSIONER PETERMAN: Thanks, Will. And I think this is -- I'm enjoying this dialogue, I mean, we'll probably have to move on at some point soon just because there's other things in the Investment Plan, but this is exactly the dialogue we need to be having, not just among -- just choices about electric cars and hydrogen cars, but also about all the different types of cars and infrastructure that the Commission supports. As I mentioned in my earlier comments, we see our role slightly differently, perhaps, than some of the other entities that are funding in this space, in that we're trying to do a broader diverse portfolio. And so, as

animated as this discussion on these two topics has been, it's even more so when you expand. And I guess I just have a slightly different view on exactly what we're doing here, Will, in terms of we do want to maximize public benefits, but to maximize public benefits at the least cost, I don't know if I would -- that is ultimately what we'd like to do, but you invest in different things if you're doing that, and I think we're looking at near, medium term and long term. But I think it's a discussion that keeps going and that we'll have an opportunity right around the corner with the '13-'14 Investment Plan design, as well, to think through this.

MR. COLEMAN: Appreciate -- I only wish I could have seen people's faces.

MS. SHARPLESS: I really support what John said and Commissioner Peterman. And I'm just reminded that, way back when in 1989, or whenever we adopted the low emission vehicle program and the ZEV mandate was within it, that we had the same skepticism, we had the same argument, and we also had the documentary *Who Killed the Electric Vehicle?* And look at the discussion we're having today. The question of readiness is really crucial because it depends on people's perspective of what readiness means, and where our benefits are going to be achieved. Any time you have an innovative technology,

there's always questions of how you get to commercializing that innovative technology that looks like it can actually deliver a large public benefit. And then there's always huge risks, huge risks, which are involved in the formula of costs. So I couldn't agree with your comments more, Commissioner Peterman.

MR. PEREZ: Thank you. I think what I'll recommend is that we take two more comments, and then we move on to the next funding category if that is okay with the Committee. So, Steve.

MR. KAFFKA: Well, I think I want to also say that I think staff has done a great job in trying to sort out all these priorities, it's a huge amount of input in terms of proposals and ideas and counterpoint views. And I would caution against the temptation to start to cannibalize these categories. For example, biofuels represents -- and biofuel production represents 20 percent of the investment in the state, but I think that realistically, the state has set goals in terms of transportation fuel, greenhouse gas reduction, as well as the Federal Government, and I think these policies are at a very kind of delicate point about whether, in fact, the fuels will be there. And we have to think about who is going to benefit, I think, in terms of the population from these policies and what the costs to the population

will be, and the majority of transportation of all types in the future is going to remain liquid transportation fuels. Its electric vehicles and other alternative vehicles are very expensive, they're going to remain expensive relative to more fuel efficient liquid transportation vehicles, and we gain quite a bit from reducing the greenhouse gas intensity of transportation fuels. And we also have much more certainty in terms of near to midterm that some of these projects could in fact generate those kinds of savings at a cost closer to what average Californians can bear. So I think that I would avoid very much the suggestion of cannibalization of these categories, myself.

MR. PEREZ: Thank you, Steve. One more comment from Mr. White and then we'll move on to the next funding category.

MR. WHITE: Thank you, Pat. Well, I think this has been a great discussion around the table and on the phone. I certainly want to second John's and Jan's comments about, you know, the need for investment to ensure that zero/near zero technologies will successfully be deployed in the state. And Bonnie mentioned the Visioning document that ARB is working on closely with several of our districts in the state, and what we're seeing in that, as we start to look at what's it going to

take to get to 2050, and what steps do we need to begin taking today, to reach those goals, not just for greenhouse gases, but for criteria pollutants, as well. What we're finding is that the timeframes we thought we were going to need to introduce and deploy these technologies are much faster as we begin to recognize the need for near term criteria pollutant reductions, that will also provide greenhouse gas reductions. So it's absolutely critical that we're making the investments in the infrastructure today so we are sending the right signals to automakers, engine manufacturers, we were talking about light-duty or heavy-duty, that these type of technologies are absolutely critical and necessary for the State to meet both its greenhouse gas and air quality goals and commitments.

MR. PEREZ: Thank you, Erik. Bonnie, did you have one final --

MS. HOLMES-GEN: Yeah, and I really wanted to agree with Commissioner Peterman and my colleagues, John Shears and Jan and Erik, and just reiterate the American Lung Association's strong support for moving forward quickly -- quickly -- with additional assistance and a real focus on hydrogen and electric vehicle categories, and just the critical nature as Erik had mentioned, not just for greenhouse gases, but for getting those near

term air pollution reductions that we need to benefit communities.

MR. PEREZ: Okay. Thank you, Bonnie. With that, we're going to move on to the third funding category, which is Alternative Fuel and Advanced Technology Vehicles, a broad category, and let me open it to questions. In fact, why don't we do something a little different? I'm going to take the people, our committee members online first. Steve and Will, would you like to comment on this category?

MR. COLEMAN: I'm all set, thanks.

MR. PEREZ: Okay, Will, please proceed.

COMMISSIONER PETERMAN: He says he's not --

MR. PEREZ: Oh, no? How about Steve? Any comments on this funding category?

MR. ELLIS: Hi, yeah, I just want to make sure you can hear me.

MR. PEREZ: Yes.

MR. ELLIS: Okay. So I think that also maybe time to explore with further future dialogue the inclusion on fuel cell electric vehicle under the Vehicle category for funding, certainly not necessarily commenting that this should occur at this time or anything, but would like to just put that on the radar screen.

MR. PEREZ: Okay. Thank you very much. Eileen Tutt.

MS. TUTT: Eileen at Cal ETC. I just want to really commend the Air Board and the CEC staff on this medium- and heavy-duty incentives and light-duty vehicle incentives. I think sometimes the agencies can compete with each other in certain ways, and I just think this is a clear example of them working together, and that the Air Board funding was deficient, and the CEC stepped up and, in a very very important way, because the truth is that these incentives are absolutely driving the market right now, and so I really appreciate the fact that you've increased it for light-duty and for medium-duty, light-duty up to $5 and medium-duty -- and I really also appreciate that you're listening, and I hope you're listening very closely to what the Air Board is telling you they need, I'm sure you are, because that money is running low again and, as these vehicles are coming out in large numbers, we want to make sure they're all -- the incentives are available, and as a -- I'm not going to say anymore. Thank you.

COMMISSIONER PETERMAN: And I'll just say that's -- I think at the beginning of last year's Investment Plan that we transferred some money to ARB to support the CVRP program, and we appreciate the

importance of the vehicle incentives, and we especially have an interest in opportunities for electric trucks. As I mentioned in my opening comments, we are in conversations with ARB about what the additional funding needs are at this immediate time with this plan, because I think, as we all appreciate, all of our categories are over-subscribed, and there's a need for money throughout the space. And so that's why, again, I say this tentatively "up to," but we thank you for your support of our support of this, if you will. And part of that is having -- we've committed to ongoing dialogue with ARB that, as we work to the '13-'14 plan, as they have some more certainty about the demand in their HVIP program, for example, as well as the discussion of a long-term plan for the CVRP, that there's opportunities for us to be of additional support, we've love to discuss those.

MR. PEREZ: Thank you. I'm going to switch over to Ralph Knight.

MR. KNIGHT: I'd just like to say thank you to Commissioner and staff for all the hard work that goes on, and also Jim Boyd. Napa Valley Unified has been involved with CEC and projects for over 22 years, we started back in AB 35, and I guess it kind of brought a tear to us as we saw one of those crowns that we invested in AB 35 headed to the crusher to be replaced with a

brand new hybrid vehicle. So, you know, times have changed, we've gone a long ways, and I think that I just want to see the opportunity for school transportation to continue to go forward like we have. There's some excellent projects that are out there, that are right on the horizon for school transportation, hydraulic hybrids, packages for electric vehicles where we can convert existing buses to electric vehicles, true electric. We've supported electric vehicles over the last 17 years and we got our first two electric buses, we had the Ford Electric Rangers in our operation, and I still have RAVs in my operation. I want to have more electric school buses, I think it's the perfect place for that type of transportation. We're promoting and getting ready to install some solar charging for our plug-in hybrid bus. I enjoy it every time I walk in to ARB's hallway down there for meetings and see the picture of our hybrid bus hanging on the wall down there, so that's a great thing to see.

I want to make sure that school bus still is there. I think, like I say, there are some projects that are on the table right now that are coming forward very quickly that I think the school bus can be a part of, and our industry probably is some of the last to get some of this technology, but I think this technology is diverting

itself towards school bus because of the budget issues that we're having right now, and bus replacement problems that are out there, so I think that I really mark those as being leading projects right now to benefit us. And I think one -- I'm not sure whether now is really the right time, but I put a little package together, and Bonnie might have looked through her package in there, we are looking -- if you look into page 2 of this, you'll see this pretty new hybrid bus with the green belt rails going down the side -- those buses are sitting in my yard right now, legal to haul you and I down the road, but we can't put a kid inside that bus because it's not CHP certified to haul kids right now. And the reason why? Because it's got green belt rails on it. Title 13 requires black. We're allowed to paint the bumpers green, that is okay, but we are not allowed to paint the belt rails black. And I guess where I go with this right now, I kind of put a fact sheet on the front, first responders need to know what they're dealing with as far as alternative fuels are concerned, and I think it's a big issue. My local fire department and fire chief supports this thing because -- it was a struggle for us at the beginning to get them on board with alternative fuels -- but I think any first responder needs to know if they've got a natural gas bus, a propane bus, electric

bus, or a hybrid bus, or any fuel that's out there, as they respond to that because, by no means do we want to see them cutting through the side of a bus to get a kid out of that bus and have them hit a 300 volt wire going through there because it's an electric vehicle, or throw a spark and let it hit that propane or natural gas. We don't want to see that happen to us.

And, you know, CHP just doesn't like changing law, but the door is open for an exemption to be able to do this. I think this is a very important item. I am so behind this and I think you'll see that Judy Byrd from the American Lung Association is one of my letters that I've attached to this to kind of give you a feel of where people are coming from with this, I have letters from Fire Chiefs across the nation with this, I've carried this across the nation, if we can get CHP to exempt these buses, it will be the first buses in the United States with green rails down the side. And I think that the whole intent of this thing is to make everybody safe. Is this green rail going to kill a kid in that bus? No, it's not. But is it going to save somebody's life? If it saves one life, a fireman, or a child on board that bus, that's a plus. And it's the difference between green and black. So, I mean, it's a real political issue for me right now and I open the door for any support

letters. My application goes in next Friday to CHP, I'm going to hand deliver it for the exemption. We are not fighting with CHP on this, they opened the door to exemption for us for this, they don't like changing law. And Title 13 controls the color of a school bus and the way it's built, and everything else, in the State of California. But they left the door open, said let's talk exemption, let's talk data collection, let's talk -- and this was before the first responder thing really led off, that they recommended the exemption process. So that's the package I put together here. And I guess I just want to again thank everybody that's involved, and what school bus has done, and like I say, we've been playing with this stuff for 22 years and we're not ready to retire yet, we're continuing to go on with more.

COMMISSIONER PETERMAN: This is Commissioner Peterman. Ralph, I just want to thank you for your enthusiastic participation in the Advisory Board over the last year since you joined us, and for really bringing to our attention some of the particular issues related to -- and opportunities related to school buses. And I think what you're working on here just speaks to some of what we're trying to think about, which is how do we prepare communities for these alternative fuels and vehicles, and we formalize that with electric vehicles in terms of the

PEV Readiness Plans, but I'm also interested in your suggestions about if there's a need with other both technologies or fuels, you know, simple things -- not simple, but important, critical, possibly overlooked things like you're bringing to our attention. So thank you.

MR. PEREZ: Okay, let's go to Erik White.

MR. WHITE: Thank you, Pat. I just wanted to thank Commissioner Peterman for her comments. It has been a pleasure to work with CEC staff to understand the needs for incentives in the light-duty and the medium- and heavy-duty marketplace. And as we look especially at the light-duty marketplace, and we look at the CVRP program that ARB has, and recognize that, even with substantial funding by ARB, we will be able to cover a third of the expected demand for this upcoming year, continued investment by the CEC as they've done in the past, which we very much have welcomed. I think it's going to be critical to ensuring that we get through this upcoming fiscal year, and then have an opportunity to sit down and talk with stakeholders and the CEC about the future of that program, and how we might need to restructure that moving forward, to recognize these clean vehicles that are coming in to California under that program.

I do want to say, though, that on the heavy-duty side, and again as we look at what the future for heavy-duty vehicles and transportation needs are, that continued investment in the heavy-duty sector is going to be important, especially as we start to look at electric vehicles, heavy-duty electric vehicles. And our upcoming funding plan is going to provide -- we're proposing to provide additional funding for electric vehicles, which we think are going to be critical towards bringing those vehicles into the marketplace much faster. We've seen a significant amount of success already in that, and we certainly want to build on that through this program.

The last thing I just want to touch on is the heavy-duty advanced technology demonstration. I think that's going to be absolutely critical as we start to look at where is there an unfilled opportunity in the marketplace for these technologies to move forward as we work with our district partners and, in particular, about local projects that they are pursuing, having that money available at the state level, I think, is going to be very important to moving these demonstration projects forward so that they can be -- so that they can get commercialized, and they can play a greater role in addressing greenhouse gas and localized air quality needs throughout the state. So I just want to emphasize that

we are fully supportive of that allocation, as well.

MR. PEREZ: Thank you, Erik. Robert Meyer.

MR. MEYER: Robert Meyer with the Employment Training Panel. I just wanted to address Ralph's comment regarding training for first responders. AT our last month's panel meeting, we approved a project in the Los Angeles Community College District that does have the first responder training within it. I'd be glad to talk with you, certainly, offline if there are other school districts that have the same need in terms of addressing it, and other regions of the state, glad to talk to them about that, but we've actually approved that training as part of the AB 118 and look forward to expanding on that.

MR. PEREZ: Thank you for that offer of support, very helpful. Mr. Carmichael.

MR. CARMICHAEL: Thank you. First, a quick thanks for the staff's continued support for natural gas vehicle incentives, this is our top priority and we appreciate staff's write-up and support for this category. I'm in receipt of, and I think all the Committee members are in receipt of, a letter from a variety of companies and organizations, CALSTART, San Joaquin Valley Air District, among others, that speaks to the last line item in this category, the Medium- and Heavy-Duty Advanced Technology Demonstration category.

And first let me say that I appreciate the enthusiasm and size of their request because it will make everything I ask for today look reasonable. More seriously, more seriously, Jamie Hall is here from CALSTART and I imagine he is going to speak to this during public comment, but I do want to express my support for the importance of this category, Erik just touched on it, for all the work we're doing deploying clean vehicles in the near term, we need to do more to develop that next generation, and in every category of vehicle that we're talking about. And to me, this is the most important category that isn't funded at the level that it could be, I guess is the way to put that. So, Jim, back to my question about any leftover funds, I would put all leftover funds, you know, in that $4-$5 million category towards this. Similarly, if there's leftover funds from this round, I think this is a top priority going forward. And I just want to register that support. I'm not quite at the level, you know, the dollar amount that they're proposing, but I appreciate their enthusiasm, as I said at the beginning.

COMMISSIONER PETERMAN: And I'll just add on that that, yes, we've heard from some of the Air Quality Districts, the various parties, about the value of increased funding in this area. I think you will note from the last Investment Plan that was put out, there is

an additional million dollars in this category than was initially proposed. And as I also mentioned in my initial comments, as we are talking to the ARB about HVIP needs and, immediately, if there's not the identified need for what we've proposed in that category, then that's an area where I could see transferring some of that money to the demonstration category as being an appropriate complement. But it's something we'll have to go back to the table and look at, but thank you for your comments.

MR. PEREZ: With that, Jan Sharpless.

MS. SHARPLESS: I guess we're all looking at the same item within this category, and I was noticing that your proposal is for the $4 million for deployment of medium- and heavy-duty electric, and $4 million for demonstration, then you back up and you look at the history in this category from $17 million to $16.5 million, down to $4 million, and it kind of brings up a question of what's behind the thinking of why this category has shrunken so.

MR. PEREZ: Yeah --

MS. SHARPLESS: And why is it equal for the deployment and the demonstration?

MR. PEREZ: Yeah. And maybe that could be part of the confusion, but in the report it actually did not

drop from $16 down to $8, when you combine those, that's actually -- the $16 was over two fiscal years.

MS. SHARPLESS: Okay, so it's --

MR. PEREZ: We combined the funding on that one.

MS. SHARPLESS: So is it eight and eight, approximately? So it's dropped by half?

MR. MCKINNEY: Correct. Jim McKinney here. Yeah, so we had $8 million allocated in '11-'12, $8.9 in '10-'11, and, yeah, the staff recommendation was to drop that to $4, and again, as we've done with some other categories where we've recommended reduced funding, we want to see how the market responds, so we put a lot of money into this category, historically. And we want to see what the return on investment is for those advanced technology projects. So that's the staff rationale for the reduced funding levels.

MS. SHARPLESS: So how long does it take for you to determine what the return on investment is going to be --

MR. MCKINNEY: I think --

MS. SHARPLESS: -- before you can decide whether you should increase the funding level?

COMMISSIONER PETERMAN: And it might be worth mentioning that, when the last recent solicitation was in

this area, which was we put it out a couple weeks ago, was when we got responses for that, so there's just recently been a solicitation, but I'll let Jim speak to it.

MR. MCKINNEY: Yes, as I said in the initial staff presentation, we did award $16 -- almost $17 million in this category. Right now, I don't have my Benefits Report copy with me, so I don't remember what the initial investments were, but to see those projects built out to completion, to see if there's uptick in the market for those, or if there's still, say, purely at the demonstration phase, or is there commercial interest in some of those? So, again, that is what staff is looking for. I think this is a good conversation with the committee members and the Commissioners right now.

MS. SHARPLESS: So can you explain to me, then, why there are some stakeholders who believe that there's enough demand out there and enough -- in the projects of benefit that this item deserves to be increased in its allocation? What's the difference between their perspective and your perspective, other than a dollar amount, in terms of how this market works?

COMMISSIONER PETERMAN: Jim can give you more specifics, but I would say I don't know if there is a difference in perspective, it's just about -- I think

there are a number of categories where we think there could be benefit from more funding, and so I don't think it's a difference of perspective so much as what's available now and wanting to see what's happened with the most recent ones, to the point about not having had the projects yet built that we funded. But, Jim, you might speak to this more.

MR. MCKINNEY: You know, my boss, Pat, I think, laid this out earlier, it's a zero sum gain. So when we increase funding in one area, we have to decrease funding in another area. It's a bit of a sausage process. And I'm glad that Eileen Tutt had the courage to kind of throw out a marker on what she things should be reduced and some other committee members have done that, as well. So, again, at the time of this drafting, that was the staff recommendation. Again, this is a good conversation amongst the committee members, and that is the committee's role, is to provide your perspective based on your expertise.

COMMISSIONER PETERMAN: And I would also just add, too, with those two categories, I think the line between demonstration and deployment is still somewhat fluid, and so that's one of the things that staff has been looking at, about how to think, or what to divide those types of funding categories, acknowledging again

that ARB has a program, HVIP, that deals with heavy-duty vehicles, that does deal with employment incentives and wanting to be supportive of that, and also continuing to do the demonstration work, and so looking at those in concert.

MS. SHARPLESS: So you could have gone with $8 million for just the demonstration and left the deployment blank, but because of the Air Resources Board's programs and what they're doing, there's a benefit to put $4 million in the deployment to help the ARB side of the program?

COMMISSIONER PETERMAN: Yes and that --

MS. SHARPLESS: Is that kind of the thinking?

COMMISSIONER PETERMAN: Yes, but I would say, you know, going back to my initial comments, we still have up to in terms of supporting ARB's program, acknowledging that, yes, there is a value, there's an opportunity for that funding, and if it's not going to be used in the deployment side, there is an opportunity to use some of that money for demonstration, or some of the other under-funded categories. Erik.

MR. WHITE: Maybe I could add a little bit, as well, Jan, on that. In our HVIP program, we continue to invest in that, but what we have seen is the demand has not been quite as great as we would have liked to have

seen it over the last several years, and so there is -- not substantial, but a sizeable amount of money that's going to be available and will continue to be available for deployment of these technologies, and so we're re-looking at some of the incentive levels and the structure of that program to try and generate some greater demand for those funds. And I think we will see that, especially on the electric vehicles, the heavy-duty electric vehicle side, with the revised program. But where we don't have an ability to make investments in ARB's portion is on the technology demonstration side, and that's where we really do look to CEC to make those critical investments on the State's behalf, to ensure that future technology we need is invested in today.

MS. SHARPLESS: Excuse me, could you tell me what your level for deployment is? How would the $4 million add to the total?

MR. WHITE: I believe that, with what we've proposed for this upcoming year, we will have about $20 million or so available and --

MS. SHARPLESS: Without the CEC --

MR. WHITE: -- and ARB HVIP funding -- yes, without the $4 million.

MS. SHARPLESS: So that would be $24 million?

MR. WHITE: Yes.

COMMISSIONER PETERMAN: This is information that we're all getting in real time, as well, and so we just got some more certainty around how much they would have, the $20 million, and that is causing us to reflect and decide whether the $4 million should be appropriated now in the deployment side, or whether to think about it in Demo and other areas.

MR. PEREZ: Okay, Bonnie, and then we'll go to Eileen.

MS. HOLMES-GEN: A couple -- do we have a chart that does show the combination with when we look at the Air Board funding and the CEC piece of this? And look at some of these categories together, whether it's joint effort?

COMMISSIONER PETERMAN: I would say no because there is going to be a lot of -- I think that would be valuable for the space generally to have that, you know, we're talking about these two particular categories, but for all these categories, there is multiple funding -- Federal, State, other incentives, and I'm wary of putting together a chart like that without significant consultation because we're going to miss some funding source and seem like we're prioritizing something else. But we're trying to address that somewhat in the write-up, but, again, maybe Erik can speak to this, but they

just recently had a public meeting where some of this information came out, and so it is more recent.

MR. WHITE: Yeah, we'll be taking our portion of the AB 118 funding plan, the ARB's portion, for the Air Quality Improvement Program, to our Board in June, so we recently workshopped our upcoming funding proposal for what we expect to be about a $28 million program for the '12-'13 fiscal year.

MS. HOLMES-GEN: Well, I just wanted to comment that the -- in addition to the discussion about the heavy-duty, the medium- and heavy-duty category here, that this is an area where we can also get tremendous near term air quality benefits, and so, you know, there is such an obvious overlap of both the CEC and the ARB mission in this category and I do think we need to look closer at it and look at the additional opportunities that we might have for expanding funding. And I wanted to ask -- and just in that regard, I think that there's going to be a big effort over the next couple of years to really look hard out at the freight movement systems in the state and how we can clean them up, what we can do through both clean-up of fuels, vehicles, equipment, and operational changes, efficiencies, looking at all of these things, but I think that our program needs to work closely with that effort to look at the bigger picture

and how we can clean up quickly in this area, and especially in impacted neighborhoods.

And I just wanted to ask, on the light-duty, we all agree that it's very important to have these light-duty electric vehicle deployment incentives, and the money is -- it's unclear, but it's probably not enough, so what happens when the money runs out? What is the process to make sure that we --

COMMISSIONER PETERMAN: ARB's program.

MR. WHITE: You're putting me on the spot, Bonnie.

MS. HOLMES-GEN: You know, what -- how do we know, is there a process in place so that we can get some additional access to funding if we need it for that category?

MR. WHITE: Well, our proposal does have contingencies in it for what we will do if we do run out of funding very rapidly. Within the program in years past, we have established a waiting list for interested purchasers of these vehicles, that they could get on, and then we will continue to work and try to obtain some additional funding for that. I think what we will do in this upcoming year is really look at how quickly the money is being expended and make some decisions relative to what time of the year that occurs, and beginning to

have some conversations and some discussions about the future of the CVRP program. Should it continue in its existing form? Do we need to look at other policy drivers to continue to expand the light-duty vehicle marketplace for these types of vehicles? So I think it's really going to depend on how quickly the money goes out, and when that happens, and what some of the thoughts are about what the future of the program is. So I don't have a really good answer that, "in the following year, the program is going to look like X," because we don't know what that is yet, but I think there's a very real possibility that it will look different than what it does, has this year, and will for the upcoming year.

COMMISSIONER PETERMAN: Great. And, Erik, just so -- obviously we're interested in what's happening with your portion of the funding -- is there another meeting scheduled where we can tell people where to go to get on the right listserv to be participating in your forums?

MR. WHITE: Yeah, I believe -- I'm going to look at my staff to see if we have a listserv for the -- we do have a listserv for the AQIP Program, so certainly they can go the ARB website and sign up for that. Our plan, though, is to take our funding plan to our Board in June, so that should be the third Thursday in June, thereabouts, it should be -- so I would expect that the

final proposed funding plan will be out about sometime in May for that.

MR. PEREZ: Thank you, Erik. And we'll go to Eileen Tutt next.

MS. TUTT: Thank you, Pat. I'm really sorry, I somehow missed that this line item was in that category, but I meant to comment on it. I just want to say, because in our written comments we did suggest that this medium- and heavy-duty advanced vehicle technology demonstration needs to be increased not quite as much as suggested by our colleagues, and we suggested it be increased by $10 million, and we suggested where the money should come from. And, again, I'm going to stick my neck out, although I will point out that no one else has, we suggested -- oh, did Bonnie? Okay, so -- that we look at the natural gas and propane vehicle incentives. And, again, not because -- just because of the relative benefits, we assume especially natural gas, which is incredibly important wonderful fuel, will benefit from the demonstrations because many of these are natural gas hybrids with electric drive assist and electric -- they're hybrids. So I really think that this number needs to go up. If I understand, and this is my question to you, if I understand right, this category was over-subscribed pretty significantly, right? And I'm just

going to say that what was most compelling to me about this letter and about the conversations that I've had around this category was from the local governments and relating to air quality and environmental benefits. We really have got to reduce these emissions at the local level. And the contribution of this category to those problems is huge. So I would just encourage you to, you know, incorporate it, at least if you want to go somewhere between -- you know, I would incorporate our suggestions if I were writing this report, and increase that number, again, we suggested up to $10 million because of the impacts of this category and the -- again, we're sort of at this cusp right now here within the electric vehicle and the hybrid electric in the medium and heavy, and if we want to meet our air quality, and our economic, and our greenhouse gas goals, we've got to transform that sector. And it is the most challenging, so given that it was over-subscribed, given the need, I would suggest we increase this category.

MR. PEREZ: All right. Thank you for your courage, Eileen. And I can see from the expression that Mr. Carmichael, you fully support the recommendations. So thank you for that.

One thing I'd like to do is pause for a few minutes. We have some people from the public who have --

it looks like flight complications in terms they have to be out of here in a little bit, and I thought what we would do is open it for a few minutes to take some public testimony from those who requested to speak through our Webcast, some of them may be here, that we take a few of them to comment on the first three categories that we have discussed this morning.

And if I may just for a moment ask Kyle Jenke to share your comments, recommendations, and reaction to the discussion this morning?

COMMISSIONER PETERMAN: And I would say, if you have to leave, you can comment on any part of the plan, but all of us plan to get out of here within the next couple hours anyway, so don't worry if you really don't have to go right away, and save your comments for the end, because I will be here through that and I also have a flight to catch later today, so there will be a firm stop.

MR. JENKE: All right. Thank, guys. It's Kyle Jenke from Edeniq and, just for those of you who don't know, a quick background, we are a California-based cellulosic fuels technology company headquartered down here in Visalia. We are also part of the California Advanced Energy Coalition, which includes a number of existing ethanol producers, some other advance technology

companies, and then also E2, who I know you guys are familiar with.

You know, first, I'd just like to say thank you quickly for giving me the opportunity to speak and I just have two points I'd like to convey here today. The first is, together with E2, we visited a number of the legislators in support of AB 523 a couple weeks ago, which, as you know, the CPRIP program, the next generation feedstocks by the middle of next year. You know, I felt our messages were really well received by the Legislature and, if I'm not mistaken, the CEC has received a letter from Chairman Gordon and others in support of CPRIP. So we just want to convey our support for that.

Secondly, we support full funding of the CPRIP program in the 2012 Investment Plan. Our view here is that it's a very important incentive to help existing ethanol plants integrate into next generation technologies like ours. These plants are beginning to make investments today, you've seen them working with companies like Edeniq, ourselves, and we'd like to be able to see them continue to do this. So I just wanted to bring up these two points and I thank you for your consideration.

MR. PEREZ: Thank you, Kyle. I'll next move to

Ken Mikenney, I believe, and Nina Kirsh from PG&E, I believe you had a constraint with your time? So please come forward and --

COMMISSIONER PETERMAN: We moved the podium so we could all see each other. If you'd like to sit in this seat here and offer your comments?

MR. MCKINNEY: So first of all, thank you everybody for allowing us to speak here. My name is Ken McKinney, I'm the Fleet Sustainability Program Manager for Verizon Communications. And we're going to talk today about a space that is yet unfunded, which is Class 2A and particularly with electric -- plug-in electric vehicles. So we're going to give -- Nina is with PG&E, so she's going to give her position on what PG&E feels about this space, and I'm going to talk about Verizon. So, next slide, please.

So, first of all, what is a Class 2A hybrid plug-in? It's got a GVW of 6001 to 8,000 pounds. Obviously, it's going to get its energy, or at least the first part of its daily energy from energy off the Grid, from plug-in. It does have the ability to continue to operate with ICE engine that turns a generator. And that's important to us, and we'll get to that when I talk about our fleet. The Class 2 would be the commercial version of the Chevy Volt, so for those of you familiar

with that, and if you're not familiar with what EREV or Extended Range Electric Vehicles are. Most common platform is light-duty pickups and commercial -- or light-duty pickups and cargo vans, and as I said, there are no incentives in this space right now. Next slide, please.

So I'm representing Via Motors here for just a minute and this is Via's number, so any questions to this slide will have to be directed to Via, not me. Their findings have shown that the typical fleet application for a Class 2 can reduce emissions and fuel up to 80 percent, that's based on a drive cycle, of course, and that drive cycle with 15,000 miles per year, we can -- they say we can see up to 83 percent of the average vehicle running on battery alone. And, as I will speak in a minute, we feel that works for us, as well. When we do see the need for the vehicle to operate longer than the battery will sustain, then it does have the ability to keep going on the ICE, and that's still more efficient. Of course, you're averaging down that zero emission part as you continue to drive on gasoline, but you know, unless you drive a really long ways, you're still going to be way ahead of the game.

The extended range functionality really mitigates the range anxiety that a lot of fleet managers

experience with buying some of the alternative fuels and, of course, BEVs. And one of the things that this particular technology can offer is an exportable power option that can allow us to do some work or provide some energy during emergencies. Next slide, please.

So I'll talk about Verizon's fleet now. Our domestic telecom fleet operates around 32,000 vehicles. About 17,000 of those vehicles are Class 2, so that kind of gives you an idea of the scope of Class 2 out there. That's 54 percent of our entire fleet. In California alone, we operate 2,867. Of those 2,867 -- these are all on-road numbers, not trailers, or mobile tool, or generators or anything, so talking stuff that rolls down the highway -- of those 2,867, 2,101 are Class 2, so 73 percent, so we beat the national average for our company by 20 percent here in California, so it's a great opportunity for us.

This application would drive on the average of 9,200 miles a year, which 260 work days works out to about 35 miles a day, fits well in the all-electric mode most of the time, but the -- and it gives us the opportunity to maybe not burn any fuel unless we have some strange circumstances. As well, it offers us exportable power to either do job site work, or, in the case of an emergency, maybe power our network and

continue to keep communications up. The problem that we see with this technology, the only problem we see with this technology, is with that same short drive cycle, we have a long ROI, so what we need to do to make this thing financially sustainable for Verizon is to find out a way to get that cost down. And we know that will come with the economy of scale, but we need something to jumpstart it. And we would sure like to see something happen in that Class 2A category. So, and I know CARB is here, so you know, the pitch goes to you guys, as well. Now, Nina is going to take over and talk about PG&E.

MR. PEREZ: Thank you.

COMMISSIONER PETERMAN: Why don't you go to the podium?

MS. KISCH: Great. Hi, my name is Nina Kisch, I'm a Manager in the Transportation Services Department at Pacific Gas and Electric Company. We have approximately 1,800 Class 2A, that's that half ton unit in the fleet, and our average replacement is about 250 units annually. What we're finding is that this technology, the plug-in electric with on-board generation, is really the best technology mix for us, it gets us 40 miles of all-electric every day, plus that emergency response capability. Obviously, we're primarily in the business of emergency response and, if

we are somewhere, that means the electricity is not on, and so there won't be generation for that vehicle if it's all-electric. It's not really so much range anxiety as it is a range fact, it just doesn't go any farther.

In addition, as Ken was saying, the on-board generation allows work crews to run all of their power tools and lights right from the truck, itself. One day, when we see more on-board generation and output available, we should have the ability to power customers back on during outages, and we think that we can get that amount of generation output up significantly so that we can look at minimizing planned outages, as well, it has that potential to really drastically change the way we do our work.

Replacing a traditional gasoline-only pickup with a PHEV could result, we've estimated in our application, an annual savings of about $2,700. What we're looking at is 40 miles all-electric; our trucks run about 15,000 miles a year, that's 10,400 all-electric miles of about a 70 percent reduction in gas, in our application.

The reason that we think incentives are needed for this technology at this time is because, even though the payback calculation is good, somewhere around five or six years, most fleets, including ours, can't afford the

upfront premium price on these advance technology vehicles. Fleets such as PG&E and Verizon look at replacement number of units each year and we're required -- we need a certain number of units that we have to get into the fleet to replace old ones leaving, and so if the premium price is too prohibitive, that means we're reducing the number of vehicles that we can buy, and that's not going to work. And we're very unlikely to request or get additional capital, not just PG&E, but other fleets, as well, to buy significantly more expensive vehicles. And so we think that, given that risk on the fleet side, that incentives can be used to mitigate the productivity risks from the manufacturer until the business model can become self-sufficient, so move the risk away from the fleet taking all of the productivity risk in a payback. Next slide.

We're just summing up that this is a huge portion of the businesses' commercial vehicle fleets and that the substantial market share is missing because of the prohibitive incremental cost of the technology, so we think that incentives would bridge that gap and accelerate economies of scale. Thank you very much.

MR. PEREZ: Thank you. I have a couple of other speakers who may have time constraints. If you do not have actual time constraints, I would ask that you

stick around for a while so that we can proceed with the formal discussion with the Advisory Committee. But let me just ask, let me apologize upfront if I corrupt these names, but Volker Amelung and Mira Inbar, I believe, are you online or here? And are you facing a time constraint? Please come forward.

COMMISSIONER PETERMAN: So as you come up, I'll just say generally, in terms of public comment, please come up and comment, we ask, of course at all Commission proceedings, that public comments be three minutes or less. We have a timer which we are not going to employ because it can be a little alarming when it goes off, and so try to stick within that area. If I find you going longer, especially since we are behind, I will politely ask you to sum up. Thanks.

MS. INBAR: Hi. My name is Mira Inbar with Dow Kokam, we're an advance lithium ion battery manufacturer.

MR. AMELUNG: My name is Volker Amelung, I'm Managing Director at Quantum Technologies. Let me start first. Go to the next slide. I'll try to do it very quickly. I think we talked about the Class 2A vehicles which, you know, I think you need to poke a little bit on what those vehicles actually represent. When you look at those bubbles here, you see that the Class 2A trucks, because of the sheer volume, is actually the second

biggest fossil fuel burner right after the Class A trucks, so it's colored in blue here right now with highlights at these vehicle class, the whole vehicle class is not considered for incentives over here. You know, obviously, when you look at individual vehicle, you know, it's not one of the largest fuel burners, but when you look at the class of vehicle it is, it represents, you know, it's a huge huge contributor to air pollution. Next slide, please.

And it is also the biggest vehicle class in fleets, you know, there is a total of around 4.5 million vehicles in fleets today, with an annual renewal number of around 580, 550, it depends on how you look at it. And I think there's a huge potential within these vehicles, in all new purchases, who can be plug-in hybrid electric or electric vehicles. Now, when you look at how it distributes, or who owns them, you know, the majority of Class 2A vehicles are in small fleets and there are lots of capital constraints. Next slide, please.

Just a quick overview. This is the technology we're talking about, it's a plug-in hybrid electric truck, works 40 miles all-electric, zero emission, it then gets into a hybrid load following mode. This technology is available today, you see a picture of a running truck, and it is manufactured in California.

Next slide, please.

Now, the benefits are very clear. Once this technology is supplied, you experience a huge reduction in carbon emissions. You know, you see the draft on there, obviously it is 100 percent when you drive it electrically, and the more you drive in a daily cycle without recharging, you know, obviously the benefit reduces. And when you look at -- when you apply a lot of vehicles, you know how many tons of Carbon Dioxide you save? It's a very compelling number. And the large volume of fleets, once this is supplied, it's very important to do that. Next slide, please.

Now, obviously job creation in California, we are using the RIMS 2 model from the Department of Commerce, which I think California uses themselves, you know, we are looking at about 100 new direct employment opportunities at Quantum and Orange County, and about 300 additional indirect and end use new employment, and that is just basically from the direct employments and when we look at the supply base, you know, they have to talk for themselves, but there's a huge other opportunity here which I think should not go to waste. Thanks.

COMMISSIONER PETERMAN: Your company was one of the winners in our -- awardees, winners -- in our first solicitation -- we're all winners -- and our first round,

so glad to see that you're still in business!

MS. INBAR: So are we, because they're our customer. We've done our own market surveys and this is one that we did with Fleet Answers with about 500 different fleets in the U.S., with capital budgets between $5 and $20 million. And there is a proclivity to buy this technology specifically for the reasons that Nina said, which is that there is no other alternative fuel that will provide that emergency response time. Next slide.

So the need for incentives we're asking for $10,000 to $12,000 per vehicle with $5 million in this year's plan. This would help support those fleets that do, as a matter of reality, have limited capital budgets, so they have to buy a certain number of vehicles a year. If a PHEV is more expensive, that lowers the total volume they can buy. It has the obvious benefits that Volker mentioned in terms of emissions reductions and, as a battery company, I can tell you that costs are coming down with volume, but we need to get that volume to start seeing economies of scale. Next slide.

So this is just to summarize again the PHEV is really the only technology for this class and this application that makes sense. And we're seeing a lot of benefits, but we need the incentives to jumpstart the

market.

MR. PEREZ: Thank you very much.

COMMISSIONER PETERMAN: There is a question, if you wouldn't mind coming back to the podium, we're going to have a quick question from Eileen Tutt.

MS. TUTT: Just very quickly. Why is it that these vehicles -- I've heard the last four speakers talk about the same thing -- why is it that they are not part of the HVIP program? Or maybe this is an Erik question.

COMMISSIONER PETERMAN: Yeah, this is probably a question for Erik.

MS. TUTT: I don't understand that. This makes a lot of sense, but I don't understand why they wouldn't be.

MR. WHITE: Our program, I don't think, has gone down to cover vehicles in this duty class. It's something that has come up -- well, the commercial vehicles have moved from CVRP to the HVIP program last year, I believe, so that would have been where the appropriate funding element of this would have been, but this case up at our workshop that we recently had and I think we were in some discussions about how -- is there a way to address these vehicles and the need and, Lucy, maybe you have some comments -- since I was not at the workshop.

MS. NEGRETE: This did come up at our workshop and we're, in fact, going to have a working group -- oh, this is Lucy Negrete, ARB -- we're going to have a working group about this particular topic because this has come up this year, it hasn't come up in the previous years. On the light-duty side, because it is a light-duty vehicle, yes, they can get funding as the CVRP, but the amount was a lot smaller when you're talking about the size of the vehicle and they're talking about in the commercial area, so it is one of those -- it's a dilemma that we're going to be looking at, and we're going to have a working group just to see if we can get them into the HVIP.

MS. TUTT: Okay, so you guys support it, it's just that it's kind of in this odd category that --

MS. NEGRETE: It's in an odd category and it's --

MS. TUTT: Okay, okay, and you're trying to resolve how to --

MS. NEGRETE: -- we're trying to resolve that right now.

MS. TUTT: Perfect. Thank you.

COMMISSIONER PETERMAN: Thank you for presenting this information to this group so that we are aware, and I think we want to make sure that we follow

what's happening with ARB and keep us aware as we plan the '13-'14 plan, in particular, about if there are some opportunities that the Advisory Group should be thinking about.

MR. PEREZ: Thanks. The next person who has a constraint is on the East Coast, representing the United States Air Force, Cameron -- and I'm not even going to attempt to pronounce your last name. Please introduce yourself if you're online? Cameron, can you hear us?

MR. GORGUINPOUR: Hello?

MR. PEREZ: Hello? Is this Cameron?

MR. GORGUINPOUR: Yes. Can you hear me now?

MR. PEREZ: Yes. Could you please introduce yourself for the record for us?

MR. GORGUINPOUR: Yes, absolutely, sorry, I was having a little trouble. I'm on my cell phone right now. My name is Camron Gorguinpour. I am Specialist Sentry Assistant Secretary to the Air Force, Installation Environment and Logistics. And I am the Executive Agent for DOD's Plug-in Electric Vehicle Program.

COMMISSIONER PETERMAN: Excuse me -- Commissioner Peterman -- we have a very good sound system, so we hear everything going on around, so if you could speak louder, perhaps, even isolate yourself in a more quiet area, we would greatly appreciate it. We want

to make sure we hear all your comments.

MR. GORGUINPOUR: Absolutely. I'm in a quiet location right now, I don't know where all the background sound was coming from.

COMMISSIONER PETERMAN: That's already better.

MR. GORGUINPOUR: It's gone away? Okay. So it was suggested that I mention the work that we're doing in the Department of Defense, all-electric vehicles, for this meeting, as it may be relevant to some of the decisions you all make, okay? And just sitting and listening on the call, it's pretty interesting stuff going on out there. So I'm appreciative of all the work you guys are doing.

So I was tasked with essentially creating this project about 18 month ago to look at DOD's non-tactical ground fleet, which includes about 200,000 vehicles worldwide, to see if there might be an overarching strategy that we could implement that would enable us to texture a large scale integration of plug-in electric vehicles into our fleet in a relatively short timeframe and, of course, with as little incremental cost as possible. And so we initiated a number of studies and analyses. Among the things that we did as part of the broader project was announce that Los Angeles Air Force Base will be the first Federal facility to replace its

entire fleet with PEVs. And that's hopefully going to happen this year. So that's underway. And all of this is to say that we are now at sort of an endpoint in our analysis where we're assembling all the data and looking at where we might be able to look towards executing sort of a larger scale procurement. And as we look across the country regionally, there are a few locations that stand out as potential candidates, California being one of them. One of the reasons why California stands out is because they have a large number of large bases in your state, which means a lot of vehicles that it could potentially impact, but also you guys are in a deregulated utility market that has access to frequency regulations, which, as we started looking at how we could execute a large scale deployment of EVs, through the use of Vehicles to Grid activities, has stood out as one of the things that we are interested in. And among the Vehicle to Grid activities, participation with frequency regulation is among the top priorities. So all of this is to say that we have done a pretty thorough job looking around, we are in the process of running our business case analyses. California looks like a location where we may choose to focus on, to the extent that other incentive programs are in place, it might help us improve the overall financial outlook, such as the HVIP Voucher

Programs, and essentially some other things. Similarly, those will be weighed as we identify if and how to proceed. I should give a caveat there, you know, we've got this budget problem in D.C. that some of you might be aware of, I hear you guys have some budget issues, too, out there. So there's no guarantee that we will do anything other than to see that we're working very hard to figure out how we can make things work within our fiscal constraints in the short term. So that's basically what I have to say. I hope it's helpful. And I'm happy to answer any questions of interest about what we're doing at DOD.

COMMISSIONER PETERMAN: Thank you very much for providing a bit more detail about your plans. I think we're excited to hear that the Air Force and various military branches are investing in alternative fuels and transportation, and looking to California to do that. Just so we're all on the same page, this is one of those opportunities that the staff is thinking would fit into the emerging opportunities, innovative technology, and federal cost share, since there will be significant investment by the Federal partner in this case. Cameron, thanks for coming online. I don't know if anyone has any questions for him at this point in time? We've got one question for you, if you don't mind, Cameron, from Simon

Mui of NRDC.

MR. MUI: Hi, Cameron. I just wanted to -- at the risk of speaking for the PEV Collaborative here, which Jim Boyd sits in the audience, there was a trip actually, just several weeks ago, to the CAISO where the California Plug-In Vehicle Collaborative members, many members, went to visit in Folsom, and we learned a lot, I think, about some of the activities you're interested in, frequency regulation being one of them. And I would encourage you to reach out to the PEV Collaborative, I'm happy to put you in touch with the folks there, as well, which we're a member of. So thank you.

MR. GORGUINPOUR: And, you know, I had hoped to make it out to that meeting, it just didn't quite fit in in my schedule, given sort of varied (inaudible) working on the broader related issues, so I heard it was a good event and I'm happy to communicate further. I should also point out that, as far as the L.A. project, we've had just a tremendous level of support in CAISO, California Energy Commission, California Public Utility Commission, and Southern California Edison, so we're really grateful for all the support we've been getting in California for the work we're doing, and hoping to do in the future.

CHAIR WEISENMILLER: Thanks again. This is

Chair Weisenmiller.

MR. PEREZ: Okay. Thank you. We'll take the next speaker who has a time constraint, Joe Gershen. Are you there?

MR. GERSHEN: Yes, I am. Can you hear me?

MR. PEREZ: Yes, we can. Please proceed.

MR. GERSHEN: Thanks. My name is Joe Gershen. I'm with Cruzer Renewable Energy and I'm speaking on behalf of the California Biodiesel Alliance. I'd like to read a letter into the docket --

CHAIR WEISENMILLER: You have three minutes, so if you want to -- we're happy to get the letter into the docket, but if you could summarize it, it would be better than reading it. Thanks.

MR. GERSHEN: Sure. Basically, we'd like to strongly object to the complete lack of infrastructure funding for biodiesel in this draft, and to request that you reconsider your decision. Biodiesel currently provides a majority of the environmental and carbon reduction benefits under the LCFS, but it's being grossly under-funded under AB 118. We feel that this is not only unfair, but it's bad policy to the State, and must sure be based on inaccurate information. Unlike renewable diesel, biodiesel is today's fuel and your own reports state biodiesel sells 10 times better than renewable

diesel nationwide, renewable diesel suffers economically when the fuel is pulled (inaudible) process. Also, as renewable diesel makes its way into the marketplace, it will be subject to all of the regulatory requirements that exist for new fuels, which biodiesel has been working through for many years. Currently, the biodiesel industry, our production is up from 5.7 million gallons in 2010, up to about 32 million gallons anticipated this year, two-thirds of our feedstock is used cooking oil and yellow grease, which is renewable second use fats and oils. We've been working on this quite extensively and we would like to really object to the lack of funding and we want to better understand where your rationale is coming from.

CHAIR WEISENMILLER: Okay, thank you.

MR. PEREZ: Okay, next speaker, Atul Deshmane, I believe, hopefully I didn't corrupt that name too bad. Atul, are you there?

MR. WAHL: He's also running late, I'm Martin Wahl. I work with Whole Energy.

MR. PEREZ: Would you like to come forward to the microphone, introduce yourself on his behalf?

MR. WAHL: My name is Martin Wahl, I'm with Whole Energy. And Atul was running late, also, so if we're going to be even delayed further, we could delay

for him, as well. Is there someone else on the agenda that could move in now?

MR. PEREZ: Yes, we could.

MR. WAHL: Okay.

MR. PEREZ: Thank you. The next person, Paul Camp.

MR. CAMP: Hi. This is Paul.

MR. PEREZ: Good morning, Paul.

MR. CAMP: Good morning. Thanks for giving me an opportunity to speak. My name is Paul Camp. I'm with a company, a process technology company from Denmark called Inbicon, and Inbicon is a subsidiary of Danish Oil and Natural Gas, or DONG Energy which is the largest power and heat generator in Denmark, in Northern Europe, and we also have the largest cellulosic ethanol plant in the world in operation there in Denmark. And we have been working very closely with California ethanol producers at a co-location platform by which we can make ultra low carbon gallons of cellulosic ethanol and also substantially reduce the greenhouse gas footprint of the existing plants in the existing industry, in a way similar to the way Brazilian sugarcane ethanol plants operate, where they use a byproduct to produce the power necessary.

I've been working with Pacific Ethanol on

various things for probably about seven or eight years now, and I've gotten to know the rest of the California ethanol industry and stakeholders like E2, as we're part of the California Advanced Energy Coalition. We've made several trips to the Air Resources Board and recently visited the State House and some of the other energy and air quality departments, that was in March. And we felt there was a lot of support for CFIP, and I think, in the short term, CFIP is very important because it's an incentive for the existing industry and for the success that the existing industry is having, and ethanol still is far and away the biofuel that is providing the most value for clean air and also economic benefits in jobs. So I am here today to back CFIP, and thank you for LCFS because LCFS provides us with an incentive to do this co-location platform in California first, but it's the kind of co-location platform that the rest of the industry can also adapt so that we can truly include the greenhouse gas and carbon footprint of our entire biofuels industry.

COMMISSIONER PETERMAN: Thank you very much.

MR. PEREZ: Okay, the next two speakers who I believe are in-house, I just want to see if, indeed, you are on a time constraint. That would be Andreas from BMW, as well as Jamie Hall from CALSTART. Are you available to stay for the next couple hours?

COMMISSIONER PETERMAN: Well, I want to give a heads up to that, I'm anticipating working through the rest of this in the next 30 minutes, and going back to -- I mean, we don't want to get a shortage of opportunity for comment, but our next -- I think, frankly, the most discussion is on the conversation we've already had, so I think if we could get some consensus from the group here at the table, maybe we can get through everything in the next half hour and we'll be back for -- Andreas, can you wait for that long? Awesome.

MR. PEREZ: Thank you.

COMMISSIONER PETERMAN: Let's get back to it, then.

MR. PEREZ: Okay, so what we'll do is we'll save the emerging opportunities for last and move directly onto Manufacturing. So we're seeking comments on the Manufacturing category.

COMMISSIONER PETERMAN: Yeah, Tim Carmichael.

MR. CARMICHAEL: Can I just take one minute to clarify something that was brought to my attention by another Advisory Committee member? I just want to make sure that everyone has the same understanding that I do, and it may not be the case for the Advisory Committee members. CEC is providing with their AB 118 money incentive funding for natural gas and propane vehicles.

ARB is not providing any money for those types of vehicles with their AB 118 money. They are providing money for electric vehicles, plug-in electric vehicles of various sizes and, you know, back to a few comments that have been made today, you look at this chart and you think, wow, why is natural gas getting all the money? And it's important to know that context and at least some of our colleagues may not have been clear on that. And I just wanted to get that on the record. I know CEC staff and ARB staff are clear, but others that are watching or coming into this process for the first time may not be clear.

COMMISSIONER PETERMAN: That was a fair point. I would also say, I mean, I'm supportive of an idea of eventually having some chart that can lay out the primary funding, we won't get it in this turnaround, but something could be done if someone wants to put it together, or working with our staff to do that for the next one, that would be good.

MR. CARMICHAEL: Thank you. On Manufacturing, I made a big plug for this at the last meeting, I think this is an important category. One thing that I'd like the staff to clarify, their current thinking, how do you feel about the eligibility of a company that manufactures components in California, as opposed to vehicles? For

example, somebody --

COMMISSIONER PETERMAN: You're eligible.

MR. CARMICHAEL: Okay, no question about that, that's -- okay, thank you very much.

MR. PEREZ: Okay, Ralph.

MR. KNIGHT: I just wanted to make one more comment before we jumped out of the heavy-duty vehicles. We're at a point now on a project to take a CNG Bus, okay, so I'm still working CNG, a CNG bus and convert it to a hybrid, so we're right there at that point right now to be able to do a project at that demonstration area. So, just so you know, we're working both angles and every angle out there that there is.

MR. PEREZ: Okay, Peter Cooper.

MR. COOPER: Yeah, Peter Cooper with the Labor Federation, and strongly support the $20 million towards manufacturing. And I just noted in the most recent Investment Plan, investment in manufacturing has significant job creation potential, as well as kind of tertiary and additional job creation impacts. I think that you've studied the Economic Policy Institute regarding that. So we would strongly support that investment amount. Also would encourage the Energy Commission to look at the benefits report that just came out this past fall when considering the variety of

categories under discussion with an eye towards the job creation potential for each of those categories.

MR. PEREZ: Thank you. Robert.

MR. MEYER: Speaking for the Employment Training Panel, I would also like to support the support for manufacturers in California, we've actually seen a great number of small to medium manufacturers that are expanding and even locating new facilities here in California. With Employment Training Panel funding, any manufacturer can participate in a training program. We would like to continue our outreach and support for California manufacturing. Thanks.

MR. PEREZ: Thank you. Jan.

MS. SHARPLESS: Yes. Is this category over-subscribed? In the past, have you had more requests than you've had?

MR. PEREZ: Yes, we have.

MS. SHARPLESS: So you have an indication that the $20 million is quickly going to evaporate once you do the solicitation?

MR. PEREZ: You're talking about demands of over $100 million for this type of program, it's pretty pretty significant.

MS. SHARPLESS: And what are the grant levels that you -- is there a minimum grant level request?

MR. PEREZ: I have to think, so $1 in $10 million is the minimum, so --

COMMISSIONER PETERMAN: One to two.

MR. PEREZ: Okay.

COMMISSIONER PETERMAN: One to two, the minimum 10, the cap.

MS. SHARPLESS: Okay, so when they come in with their proposals, the option that they would receive would be somewhere between $1 to $10 million?

MR. PEREZ: Correct.

MS. SHARPLESS: So two projects could take the whole amount? Okay.

MR. PEREZ: Okay, who else do we -- Peter, did you have something to add? Okay, is that it for Manufacturing? Okay. Okay, Workforce Development and Training, quickly related -- closely related, I should say. I imagine Robert --

COMMISSIONER PETERMAN: You're in high support of it, hopefully?

MR. MEYER: Yeah, Robert Meyer with the Employment Training Panel. We'd like to thank the Commission formally, as this is our area, for their efforts, as well as staff. ETP has, I think, been successful in implementing the program and we have built a few regional models working particularly and closely

with the PEV Collaborative to expand our funding blueprint to statewide sort of networking with re-deployable contracts, so we've looked to build and fund contracts servicing a wide range of areas, and we look to continue to expand them as we support the outreach of the statewide collaborative into each of the local and regional efforts. This enables us to take advantage of the local and regional expertise, particularly local community colleges, and workforce investment board, as well as larger trade and industry-based associations. So we look forward to continuing to do that and fund programs specifically in these areas.

MR. PEREZ: Thank you. Okay. John Shears.

MR. SHEARS: Yeah, just some -- a clarifying question, or maybe just a forward-looking observation. By models, you're basically just talking about deployment models for how to get this money out there and set up the training programs?

MR. MEYER: Well, these are actually -- we're funding the training that's actually occurring, so the contractor develops the program, they select trainers, identify the actual training needs for the job skills, within their specific technology and industry. It must specifically focus on the goals of the Investment Plan and, then, we work with the contract development through

the contract. The reimbursement is actually based on the training being delivered to the workers in California.

MR. SHEARS: Right, so by "models," you're not talking about -- because what I was thinking before you made your comment was I'm just wondering to what extent because I expect there's quite a demand and quite a need to support in this area, and I'm just wondering what kind of like needs assessment and forward-looking kind of information is available, can be made available.

MR. COOPER: John, actually I was going to comment on that very point. In the plan, there is funding that I believe is set aside for the Labor Market Information Division of EDD to do a needs assessment, which I think is a great idea. I think that there is -- the amount of funding that is available in workforce and, frankly, in manufacturing, is by and far not enough, so strategically thinking where to invest makes a lot of sense. My comment was going to be, and is, that the Labor Market Information Division coordinate their efforts with the California Workforce Investment Board, which is planning over the next year to do significant outreach work at regional level with industry and with labor, to kind of look at workforce needs in all different sectors of the economy, but certainly should coordinate with this initiative.

MR. PEREZ: Thank you, Peter. And let me just ask from our colleagues that are participating by Webcast, and I refer to our Advisory Committee members, any comments on Manufacturing or Workforce Development and Training from either one of you?

Okay, with that, we'll move on to Market and Program Development. Peter, would you like to speak? I see you have your request.

MR. COOPER: Oh, I just did have one question, maybe a point of clarification, regarding the regional alternative fuel readiness and planning. Now, is that planning process -- I was just speaking about another planning process -- that planning process is specifically focused on electrical vehicle deployment? Is that correct?

MR. PEREZ: Yes. We have nine agreements right now to assist that and possibly we'll be moving into a tenth agreement for a more rural type area, so -- Jim.

MR. MCKINNEY: Yeah, and then, to elaborate on what Pat said, we think this is a really needed and successful part of our program, and I think part of the proposal in this year's Investment Plan is to expand that to the other fuel categories to get this level of, you know, regional cooperation and planning, but to cover all the fuel types. And it sounds like you are suggesting

that we further link this with the Workforce Training and Development options.

MR. COOPER: Yes, that would be my recommendation.

MR. PEREZ: Eileen Tutt.

MS. TUTT: Eileen with Cal ETC. I just want to say that I think that the issue that I have with the Regional Readiness efforts being expanded to other fuels is that, and not that I'm opposed to that, but that the ground -- you know, the effort on the ground that happened before we came to you asking for this money last year, and you graciously included it, and it was subscribed, I am sure you have heard from the various regions that have gotten this funding, it's been incredibly beneficial, and it's going to accomplish a lot, I mean, I agree with you, this is a great use of this money. But it wasn't like was -- there were already collaboratives, there are already regional collaboratives, there was already a lot of coordination, and so these folks were ready to accept that money and use it in ways that benefitted the deployment of electric vehicles. So I just don't know if that exists for other fuels, and I don't know that you've done the work to figure that out, but what I would say is, where the regional efforts need more money is now to expand upon

that regional -- the regional effort's ability to do things like workplace charging. So, for example, in a city, large employers are very important to most communities, and they will do a lot to keep those employers. They want to make them happy and they work with them; the same is true for local utilities, the utilities want -- they work very closely -- that's a customer, those big industrial customers are huge. We need to leverage that and leverage the regional efforts that are already underway and allow those folks to work with the like large employers to put in electric vehicle charging, so this could be expanded not just to other fuels because now you've increased the amount of money, and I'm not even sure that they're ready on the ground to use that money at the regional, local level, I don't see it in my own work with them. But what they are willing to do, and ready to do, is reach out to their big workplace facilities and help -- and same with MUDs, and help them put in charging which, again, really -- it just promotes market growth, and even though we have a lot of vehicles coming out, the level of consumer demand is not all that clear, and we need to do everything we can to get people interested and willing to buy these vehicles, and workplace charging and MUD charging is a big part. So I would say I like the $3 million, but I'd like to

expand the scope, particularly -- maybe just for PEVs since they've already kind of done the other part, but allow them to have some funding to implement programs that would encourage workplace and MUD charging at the local level because they are just so connected to these workplaces.

COMMISSIONER PETERMAN: And I think you're -- this is Commissioner Peterman -- Eileen, your comments will also be useful generally going forward in thinking about how to do solicitations, and where to prioritize within that, so that's good. Thank you for getting some of that information on the record.

MR. PEREZ: Thank you. Now, with that, we're going to move back to the one category that we skipped, which is the Emerging Opportunities. I believe this is also an area where much of the public will have comments on their individual projects. As you recall, at our last Advisory Committee meeting, I laid out the challenge for all parties to come back with methodologies and criteria on how we might allocate this funding, and I don't believe we received any comments on that. We recognize that that is a true challenge. So with that, we would like to get any additional input comments you have no this proposed funding amount for the capturing of Federal solicitation opportunities, as well as other

opportunities that may emerge as we move forward in Fiscal Year '12-'13. I will open that for any comments from the Advisory Committee. Let me begin with the people online. Any reaction, comments, recommendations?

MR. COLEMAN: This is Will Coleman. I just wanted to actually thank the Commission for instituting this category, in general. I think, you know, speaking from the point of view of the investment side, you know, we see a lot of exceptions on a regular basis, and I understand it's been, you know, somewhat of a challenge to figure out how to deploy the dollars in a way that aligns with some of these different companies' timeframes. So I would be curious, and this probably isn't the forum, but maybe there's a way to follow-up offline and see if there's a way to dig into that and how to better align some of the timing with some of the opportunities. But I do think that, from what we see on a regular basis, there are an enormous number of companies that are in and around this space, that don't cleanly fall into one of the categories, and I think this is an important sort of exception-based category to allow some of those companies to apply for these funds. So, thank you for that.

MR. PEREZ: Thank you, Will. Okay, Steve, are you online? Do you have any comments? Okay. Looking

around the table, Mr. Carmichael.

MR. CARMICHAEL: I'm starting to feel like I'm in trouble, Pat. You're calling Steve and Will by their first name and me "Mr. Carmichael" every time. It's a little uncomfortable.

COMMISSIONER PETERMAN: We don't want to confuse you with Tim Olson, the other --

MR. CARMICHAEL: Yes.

MR. PEREZ: So I don't get mixed up.

MR. CARMICHAEL: Okay, all right. Nice cover, Commissioner Peterman, nice cover.

MR. PEREZ: Thank you, Commissioner, for that.

MR. CARMICHAEL: So on Emerging Opportunities, I want to echo the comments of Will Coleman that I think this is an important category for the unexpected and the, you know, maybe the longer shot opportunity that is presented to you, to this agency. And I think at this level of funding, it's very wise to have this set aside. That said, you get to near the end of this cycle and you don't have $3.5 million or more in really good ideas that came forward for this, I have a few ideas on how you can spend this money.

COMMISSIONER PETERMAN: Fair enough.

MR. PEREZ: Thank you. John Shears.

MR. SHEARS: I was going to try and put Tom

Fulks on the spot since he was the one that pushed so hard for this, this category originally, but he's not here anymore, so he gets off the hook. I was just thinking, you know, given the challenges of trying to actually figure out a practical framework for screening and navigating this area, it seems like it's something that's, you know -- unfortunately, the timeline may not really work for this round, but it seems like something that would be appropriate for an informal workshop, get a bunch of people together and really like just go over it and develop it that way. I think just offering suggestions is a start, but I think it would need to be developed and explored a lot more thoroughly.

COMMISSIONER PETERMAN: And I -- this is Commissioner Peterman -- also, I think there could be some informal workshop, especially thinking about the '13-'14 Plan, because I think there are a number of projects that have come to the attention of the Commission from various members, as well as from some of our Federal partners, that fit well into this category and there will be some lessons learned from doing those solicitations. And kind of starting with having done some, maybe that will help everyone think about, is that the right way to do it? Is there a better way, you know, giving people a straw man to work from vs. just keeping

it broadly open. And so, if members are interested in that, I'd recommend that as well for some time later in the summer or the year after we've had some experience with a couple of these.

MR. PEREZ: Great. Well, thank you all for your input here. I think at this point in time, we would like to open it to public comments. We encourage all parties to come forward. Keep your comments brief. If you've submitted materials to the docket, we remind you to just simply summarize what's in those documents. We'll give each party up to three minutes, and I have two other people that may have time constraints, we'll take them first, and then we'll just walk through each of the presenters, both online and those here.

COMMISSIONER PETERMAN: And if you'd like to make a public comment and you're in the room, please fill out a blue card and hand it to someone. Thanks.

MR. PEREZ: Thank you, Commissioner. So let me begin with Andreas from BMW.

MR. KLUGESDAD: So I have provided a Powerpoint, I don't know if anyone is able to get that on? And I hope it is not deducted from my three minutes, right?

COMMISSIONER PETERMAN: Your three minutes will start in a second, but you have to include it -- your

Powerpoint is included in that.

MR. KLUGESDAD: Sure. Okay, so my name is Andreas Klugesdad, I was President of Governmental Affairs with BMW Group. And I'm here today to give you an update on the combo charging system, we briefly heard about that in the context of Level 3 charging and potential funding opportunities. If you can go on to the next slide, please?

COMMISSIONER PETERMAN: Andreas, excuse me one second, this is not your three minutes. Considering this is a topic that was of heavy discussion earlier in the day, you can take a couple more minutes than three to make sure that everyone is up to speed on what's going on in this area. Thanks.

MR. KLUGESDAD: This is very much appreciated, thank you. So I will slow down in my speech? So really, just to give you a brief idea of what is combo, many of you may know that it's basically a level three charging system that combines level 1, 2 and 3 in one plug, on contrast to what is out on the market right now, where we have basically two -- not two plugs, but two ports in the car that actually allow for the charging of the car in level 1, 2, and 3, we have with the combo system one plug in the car. Next chart, please. So that's what it looks like. Basically, the largest asset of combo for us is

OEMs and for the customers, really, is an easier handling, it's lighter in the car, less cost in the car, again, customer benefit, as well, not only ours, and it also allows through the communication protocols that we are using for larger and more beneficial Smart Grid applications in the future. So, next chart.

We can probably even skip that one, just to remain in the three minutes if at any way possible. So just to give you an idea of where we are with BMW now, we started working on combo in 2010, we have already out there with the BMW ActiveE a couple of demonstrators. By the way, the BMW ActiveE is available as a second-generation BMW electric car in California right now, and some of these several hundred cars are combo capable.

Now, when it comes to certification, we are working together with SAE to get the certification finished by probably somewhere this year, and there's a good chance that we are probably even a bit faster than that. And we'll see certified combo chargers available by the end of this year. Next year, though, we'll see also, then, products coming into the market -- please show us the next slide -- these are only the ones that are already officially announced and we are positive there will be others coming into the market, as well, very soon, so the Chevy Spark is going to become capable,

the BMW i3 is a combo car, and also the Volkswagen Up, again, more to come. Next chart, please.

So just to give you an idea who is supporting the combo standard for DC fast charging, we have the big three, so to say, Chrysler for GM, we have basically all German OEMs, which is Audi, Daimler, Volkswagen, Porsche, and BMW. And we have several other smaller manufacturers and also some of the Japanese manufacturers who are at least considering this standard. On the supplier side, you see for yourself plenty of suppliers who are currently working on hardware, and so on. So, next chart, please.

You will have a chance to see all that at E West 26 early in May where we have a demonstration at the show floor, actually, to inform the public about where we are with combo. Now, coming to the Investment Plan, I think it's decisive and I'm speaking here not only for BMW, but really for all involved parties in the combo standard, that we will not only consider, as it is mentioned now in the draft Investment Plan, either of the standards for roll-out with level 3 charging in the future, but I think, and we think, it's decisive to have, from now on, basically for every hardware, for every charger, a level 3 that we install, the availability of SAE or combo standard, as it is called -- SAE and combo

is very much the same -- in the market, on the road, really, in order to provide a level playing field for all users of electric vehicles, and in order to have a non-discriminatory approach to level 3 charging. So that is basically what I want to communicate here. Combo is out there, it's going to be certified this year, products are out there when it comes to chargers by the end of the year when it comes to cars, next year, and it's time to get that implemented and on the road. Oh, one comment, going away from that, before I forget, I would also like to stress what Eileen and others have said in terms of AB 118 vehicle program, light-duty vehicle program, I just want to voice the support of BMW that there is going to be transfer of money really towards ARB in that respect because we all think it's hugely important to make sure that a certain level of funding and a certain level of incentives is provided for EV drivers, also, in the future. That's going away from that.

MR. SHEARS: Yeah, so just -- Andreas, thanks a lot because I think this was a timely presentation. I just want to raise a couple of clarifying points. The current PON that's out asks that, you know, fast chargers that are successful, and projects that have fast chargers, that the fast chargers be upgradeable to the combo coupler standard. I think the challenge for the

CEC, especially in developing the next PON, is actually, you know, what is upgradeable in theory vs. what in reality and practicality is an upgradeable charger unit. So, again, I encourage, you know, we have talked about this, and encouraged industry if they could provide sort of like the criteria in terms of the communications boards and all the other parallel hardware that would have to go in with, you know, on the SAE side vs. the CHAdeMO side of the charge unit, I think that would really help the staff out. And then, also, in terms of managing this transition, there are indeed a couple of manufacturers, at least, right now who are designing combo -- or charge units that have both plugs on them, just also wanted to let people know that the manufacturers are also looking at this transition issue.

MR. KLUGESDAD: If I just can answer your request. On the question of hardware upgradeability, so to say, on the one hand we think that, as hardware is just around the corner, really, it probably makes sense to, at least from now on, consider not units that are upgradeable, but rather that are actually providing SAE, or combo standard, very much from the beginning. We are more than happy, actually, to provide CEC staff with specs with some technical details, also to make sure that the investments go into the right direction in that

respect, and for you to evaluate these specs.

On the question of hardware when it comes to chargers, you mentioned rightly that there's actually a group of companies actually working on that, it's not only a single one, or what have you, but rather a number of providers in that field, as you probably briefly saw in the Powerpoint, in the middle column they were mentioned there.

MR. SHEARS: And amongst the others. So maybe just to clarify because, I don't know, the current PON, is the deadline for submissions -- it's closed, so -- and in reviewing, would it still be helpful if industry provided staff with screening criteria? Would that still be timely and useful?

MR. KLUGESDAD: Well, we would certainly do that if you indicate that it's of value for you.

MR. PEREZ: Yeah, we'll certainly consider any input you can provide to see if, indeed, we need to make adjustments down the road, so we would welcome any information you can provide. Please provide it quickly, though.

MR. KLUGESDAD: We will do our very best.

MR. PEREZ: In the next week.

MR. KLUGESDAD: Okay.

MR. PEREZ: Appreciate it.

COMMISSIONER PETERMAN: Thank you, Andreas.

MR. KLUGESDAD: Thank you.

MS. TUTT: Eileen at Cal ETC, real quick question. Are you -- because the way the PON and the CEC plan right now is written, it doesn't sort of pick one over the other, it says that you could do either basically and get funded. And if I am understanding, are you suggesting that it's time for the CEC to pick combo as the path forward? Because the language in the report right now and in the PON right now allows for either one, and so, if I'm understanding -- and maybe I'm just not understanding -- but it almost sounds like what John is suggesting is that you provide clarification so that it doesn't do that anymore, and I'm not sure -- I don't think, anyway, that that's what you're saying. And the other piece that I just want to hear from you on, particularly, is in the thing that I understood about the NRG settlement, that I do like, although it's not public, but the part that is public that has been discussed, is that the fast chargers that they're putting in can accommodate both types. And so my sense is that that's kind of where we are right now. We haven't picked one. Does that make sense?

MR. KLUGESDAD: Well, what I'm not asking or requesting is that the Energy Commission or any other

entity is actually picking a winner in that game, that's not the idea. The idea is, and maybe I got that wrong, in the Investment Plan it says either of the technologies will be available, so that could imply that it is an only combo, or an only CHAdeMO charger, and my point is that every infrastructure that is out there should be able to serve combo, that could potentially mean in the interpretation, then, that we will from now on only see these dual chargers that can do both, right? Again, hardware just about to come. Or, you know, if it's an SAE combo only charger, obviously that would be good for us, but that's not the request, really, is that we are only doing from now on infrastructure that only covers SAE combo, right? But it has to also cover SAE combo, that's the point. On the Energy agreement/settlement, I'm with you, I saw that with pleasure, as well. My interpretation is, as well, that it is going exactly that route, right? But I'm also sure that we need to penetrate that message a bit further also in that respect.

MR. PEREZ: Okay, thank you. Next speaker, Jamie Hall.

MR. HALL: Good afternoon, everyone. Thank you. I want to thank the Commissioners, the staff, and all the volunteer Advisory Committee here for all the

work that's gone into this so far. I'm Jamie Hall, I'm Policy Director for CALSTART, but I'm actually here today on behalf of a larger group to highlight the need for more investment in medium- and heavy-duty technology advancement. I did hand out to all of you an enthusiastic letter, described by Tim Carmichael, with 12 organizations and that list is growing, we've added one more California manufacturer just while I've been sitting here, and I just want to summarize quickly some of the key points of this letter and request.

First, you know, we definitely recognize the resource constraints here, how late we are in the process, and that there are a lot of competing priorities. Therefore, we really appreciate all the investments in this sector to date, but this group thinks a lot more is needed both this year and in future years. Trucks and buses, especially for goods movement, are a big and growing piece of California's oil addiction, greenhouse gas, and air quality problems, therefore we really need advance technologies in this sector, but where we are right now, we really have a long way to go, and I think there are two real reasons for this. First, California -- I've often heard Tim Carmichael say this -- we sort of lack a plan and vision for the medium- and heavy-duty sector, we've got a lot going on in the light-

duty side, we have the ZEV Program. CARB is now starting to do a visioning process, I know, that is going to address this, but we're sort of several steps behind the light-duty sector, and undeniably we have a long way to go.

Second, truck and bus manufacturers lack the capacity to do the large scale research, development and demonstration that you see out of a lot of the car companies because the production volumes are just not high enough to justify this and they can't spread the cost over, you know, millions of vehicle sales. So public money really plays a very important role in moving things forward here, and we think there's a need for significant and sustained funding for the next three years or so. You had to go big in the letter, even this late in the process, and ask for an enthusiastic $20 million, we recognize that, you know, where we are today, that may be tough. Certainly, at a minimum we would support -- I think there has been a lot of support here today from Eileen and others for bumping it up somewhat, maybe in the neighborhood of $10, and then you can sort of consider this letter an early submission for the docket for next year and ongoing funding.

COMMISSIONER PETERMAN: You still have to file it again next year.

MR. HALL: I will. But I just want to get this out there, that this is not just a request for now, and I know we're late now and if we were to get $10 this year, and sort of work on stepping it up later, that would make sense. To quickly respond to the comments from staff about needing to wait and see where these investments go, it's sort of going to take a long time and when you do a demonstration project, it takes a while, you've got to get the data back, you've got to look at the market, and if we were to do that sort of serial process, I think we would be moving forward more slowly than people in, say, the South Coast and San Joaquin Valley think we really need to in this sector. So, with that, there are more details in the letter and we will submit this officially when we get a few more companies on board.

MR. PEREZ: Thank you, Jamie.

MR. HALL: Thank you.

MR. PEREZ: Michael Block.

MR. BLOCK: Thanks. My name is Michael Block. I'm here representing the Electrification Leadership Council. And I'll preface my comments by saying that I may be on familiar ground here, you may know a bit more about this, and if that's the case, I don't want to repeat myself. Feel free to kind of ask me to go on to Part 2, which would be more talking a little bit about

just what's happening, latest developments. But let me at least just frame what the Electrification Leadership Council is. We're a coalition of stakeholder companies in the electric vehicle industry, and I think many of you are aware of that, and what we've done is we've pulled our resources to engage with Government and other coalitions. And the idea is to do a eventually broad scale commercial electric vehicle deployment and make that a reality in California. And we've been working on this since August of 2010.

We have a core group of members, some of them include companies you're familiar with, Coda, Ecotality, FedEx, GE Capital, 8123 Systems, UPS, Hertz, and Navistar, and some other ones. And the idea eventually is to expand this core to a much much larger base, and there are other companies that are interested in doing that. As I mentioned, the goal is to design and execute a large scale commercial electric vehicle demonstration project in California. And let me preface that comment by saying this is not at the exclusion of the consumer market or any other, we think that there's a place for all these different types of technologies, but we think that the commercial vehicle market is a unique one, and one that requires something a bit special, and that's why this coalition was really formed. We've targeted two

areas, we've talked a lot of different areas, we've targeted two areas, no final decision yet, but potentially in the Bay Area and the South Coast. And the idea is 1,500 vehicles over two years, which is pretty ambitious, but we think we can do it.

The problem, I think -- we think -- in terms of the commercial vehicle market with other attempts to do this is that there's no one provider that can provide the entire package. You've got electric vehicle manufacturers, you've got people that are making infrastructure, etc., etc., and so the thought was that, if you look at it from a perspective of a fleet buyer, a fleet buyers wants, you know, give me everything, don't just give me the baseball uniform, give me the bat and the ball and the shoes, and everything else, so I can build a team. And that's really the whole kind of basic purpose behind this.

And so there's kind of a sea change, if you will, or a challenge between a person buying a Nissan *Leaf*, one car, vs. a fleet buying 50 electric vehicle trucks. And so this group is designed to try and meet that challenge. And those challenges include a whole lot of things, obviously, there's cost, there's some public policy issues, there's obviously the cost of the equipment, in-use operator experience, this is a

commercial market, trucks have to keep on running, so vocational training is going to be key, you know, user acceptance, and I think one of the key ones also is the inter-operation between the electric vehicle and the Grid, itself, and we've kind of touched upon that a little bit.

We think that the benefits are rather obvious, obviously cleaner air, less energy dependence, and so on and so forth. But I think that another benefit is that we can get feedback from this. Commercial operators are not bashful, and so they'll come back with lessons learned in, I think, a very expeditious way, so that the next round and the next round and the next round can be even more successful. This clearly aligns, I think, with the missions of California, and the California Energy Commission, in terms of reduced energy dependence and workforce development, and a whole bunch of things along those lines.

By way of an update, we've talked with -- obviously, I think we've talked with you before, we have a proposal in to you, we've talked to our friends over at ARB, we have a proposal in to them and we'll be talking to them even further. We've talked with a number of the Air Quality and Management Districts and, as I say, we seem to be focused on South Coast and potentially the Bay

Area, as well. And, really, I think just to summarize, this is a real sea change in terms of how we go about getting electric vehicles into this market, but we think it's a real good one. And I think maybe the takeaway from this is that we cannot and don't want to do it without CEC and ARB and the other agencies. Thank you.

MR. PEREZ: Thank you, Michael. John Clements.

MR. CLEMENTS: Good afternoon, Commissioners and Advisory Panel. I'm John Clements, Director of Transportation for Kings Canyon Unified, also representing the Central Valley Transportation Center that we partner with the City of Reedley and soon, hopefully, Reedley College. I just wanted to comment that we are a recipient of Robert's ETP funds, we just received a grant for about $43,200 in which we are going to work to train our technicians and train some of the next generation, that are going to take those technicians' places that are soon to retire, to maintain our five hybrids that are arriving now, and are electric -- first production electric school bus.

With respect to the HVIP money, HVIP is being utilized to fund this particular bus to the tune of about $40,000, and hopefully will fund some in the future that we will be receiving CMAC monies for, that will use as our portion of our match. So I'd just like to say that

we're in support of the Center for Alt Fuels and Advance Vehicles, we believe that will help us drive the stake in the ground for the first portion of our Central Valley Transportation Center, glad to see that that's firmed up. I also wish that Peter Ward was here because I wanted to publicly apologize to him, I was hammering on him a little bit before he retired with respect to the buy-down for CNG funds. We arrived today and our first light-duty CNG four-transit connect, and we didn't get any buy-down money for that, but having seen the list recently of the manufacturers that did receive money, I'm excited that Navistar is on that list and we might have another vendor in the market that will be providing CNG school buses to us in the near future. So keep that going, and also we just recently missed the boat on the solicitation for CNG infrastructure for school districts, I'm sad that we couldn't have helped with that amount of funds earlier that was mentioned, that you didn't have enough solicitations for, hope that that's available in the next round of funding because I know that our school district, as well as several municipalities in the Fresno Central Valley Region could certainly use some of those funds to upgrade our existing older CNG stations. So we, for some reason that went across our radar and we weren't even aware of that, and we would welcome the opportunity to be

able to go for those funds in the future. Thank you.

COMMISSIONER PETERMAN: Thank you for your comments, and I think also you were a recipient in our first round of funding, $300,000, and so the AB 118 plan has been supportive of your work, and continues to be supportive of that work.

MR. CLEMENTS: Thank you very much. There's my ETP funding program right there.

COMMISSIONER PETERMAN: But this is something else I'm talking about, I'm talking about the funding from this program that you've already received -- it was one of the ones you didn't mention, so I was just going to point that out.

MR. CLEMENTS: Oh, yeah, absolutely, that's correct. We are in the previous funds under the name of the City of Reedley going towards our project in the amount of $480,000, that is for electrical charging infrastructure and also for some other CNG funding. Thank you very much.

COMMISSIONER PETERMAN: Terrific. Thank you.

MR. PEREZ: Okay, next speaker, Matt Miyasato, South Coast Air Quality Management District.

MR. MIYASATO: Okay. Thank you, Pat. Good morning, Chairman Weisenmiller, Commissioner Peterman, and I also want to acknowledge the Commissioner Emeritus,

is that the right title for Commissioner Boyd out in the audience? It's good to be here. For the record, Matt Miyasato, Assistant Deputy for Technology Advancement at the South Coast AQMD. I wanted to frame my comments in terms of the air quality challenge that we face in the South Coast Basin. I'm sure you're familiar with the Greater L.A. Region. We suffer from the worst air quality in the nation and, in order to get where we need to be for the Federal Attainment Standards for Ozone, we've been looking at reducing NO_x emissions that is all combustion sources by 80 to 90 percent. And so I'm glad that Bonnie mentioned the visioning process that we're undertaking with Erik and his group at the Air Resources Board, also involving San Joaquin Valley. And we've been aggressively focused and actively focused on getting to zero emission technologies in many different sectors. And so there are two main comments I'd like to make, one is we see the Energy Commission maintaining and even expanding your leadership role in two particular areas where you can essentially effect the transformation of the transportation sector, in particular, hydrogen fueling infrastructure, so we can see the evolution from zero emissions to fuel cell vehicles. So we really urge you to, if you can exercise some head room and backfill, is look at hydrogen infrastructure.

But more importantly, I want to also emphasize and agree with the comments from CALSTART and also Tim Carmichael in your Medium- and Heavy-Duty Advanced Vehicle Technology Demonstration category. We believe that's underfunded and I think that was shown by the over-subscription in your recent solicitation awards and your NOPA. I do want to make a clarifying comment that the award of the $16.9 million was a great step by the Energy Commission, we applaud you for making those awards, we were participants on one of the awardees, CALSTART. But I also want to simply make the observation that the solicitation was really geared towards goods movement, and yet there was, I think, one project that was really goods movement related for on-road technologies. And so I would urge you to reconsider those and, if you are going to focus on goods movement in this technology sector, is to really apply some rigid criteria in terms of how do you actually realize those benefits in the goods movement area.

The second comment is what we've been proposing for the past three years, I know it's very difficult to try to work together to do block grants with the Air Districts, or having carve-outs in terms of how do we work together to leverage each other's fundings. We're also a funding agency and we'd love to work with the

Energy Commission, so what I would suggest is, if we can't increase perhaps the Medium- and Heavy-Duty Advanced Vehicle Technology Demonstration category, where you might want to increase your funding is in the Emerging Opportunities sector. That gives you the flexibility to take advantage of programs that are underway.

I would also suggest that it's not solely Federally co-funded projects, but projects that are funded by the Air Districts, the South Coast AQMD, the Ports, for example, working very closely with the Port of L.A., Long Beach, on their Technology Advancement Plan, and we're also going after some near term opportunities with the Department of Energy for zero emission cargo freight movement, and so we'd love the opportunity to work with the Energy Commission on that solicitation, or that proposal.

So, in closing, I'd just urge you to continue working with us. If there's an opportunity to work together more closely, we would welcome that. We offer our services and really maintain your leadership in those three categories, Hydrogen Infrastructure, and Medium- and Heavy-Duty Vehicle Technology Demonstrations, but more importantly goods movement technologies, zero emission goods movement technologies, and also the

Emerging Opportunities category.

COMMISSIONER PETERMAN: Matt, thank you for your comments. I've appreciated the opportunities to have meeting with you and South Coast, and the more we can further collaborate, especially on our funding, I'm supportive of that, and I think you've made some good suggestions for some things for the group to think about. Thank you.

MR. MIYASATO: Thank you.

MR. PEREZ: Thank you, Matt. I think we're going to return back to Atul Deshmane. I believe you're available online? Atul, are you there?

MR. DESHMANE: Can you hear me now?

MR. PEREZ: Yes, we can. Atul, please introduce yourself and proceed.

MR. DESHMANE: Thank you. My name is Atul Deshmane and I am with Whole Energy Fuels. I am President of the company. And I appreciate the opportunity to quickly present an industry update on California Energy Commission activities as they relate to the industry, particularly the biodiesel industry. And my main thesis is to just mention that, although the programs have been really helpful to date, from the CEC one aspect that needs to be addressed for the future is the importance of co-products, to move us towards a

biorefining vision.

COMMISSIONER PETERMAN: Are you still on the line? Well, we can't hear you --

MR. DESHMANE: Hello?

COMMISSIONER PETERMAN: Oh, we lost you for a second. So we heard your introduction. And so now we're on the slide that says "Company Background," if you want to start there.

MR. DESHMANE: Thank you. So the company has multiple regional facilities, several in the northwest, and also in California. We focus on distributing and marketing products made by local producers, there are several in California that we work with in Northern and Southern California. And the other focus of our company is to refine the co-products that are made at those facilities. And we have been very interested in the California Energy Commission's solicitations in regards to the co-products. We serve our industry by matching different feedstocks to producers. We supply feedstocks to those producers in California and producers to the market, of course, again, through the terminal facilities, and then lastly sometimes helping them find new technologies that might help. Next slide.

And some pictures of our facilities. Next slide. And a listing of those facilities. Again, a

couple facilities in California, and also in the northwest. Next slide. So one of the areas, one of the technologies that we've talked to several producers about, that will both provide demo benefit and, of course, benefits for our company, are in the processing of glycerin. There's a specific focus that our company has on glycerin, but that does not mean that there's not co-products from other biofuel producers in the state, and the importance on helping those biofuel producers not just in the biodiesel space, but all biofuel producers get support from the California Energy Commission to develop and market their co-products.

I will just focus quickly on one aspect that we think has a lot of potential, and that is in just simply distilling glycerin. It is a product that today the producers are not getting a sufficient value on it, and we want to help them get greater value, and of course, help ourselves by doing that. And currently the market values on glycerin represent maybe less than a percent of the total revenue that a biodiesel company can make, and we want to bring that up into the couple percent range. And producing a commodity product, that is very important because that additional percentage go directly to your bottom line and you probably know that biodiesel industry has on and off been struggling. So that's why we see the

co-products as being so important. Next slide, please.

One specific area where glycerin is being used is in a process called Glycerolysis, one which we are piloting up here in the northwest, which actually allows you to recover very very high SSA raw material. There are other beneficial uses of glycerin. Today, we market the glycerin into about half a dozen different markets that in all cases are a non-toxic improvement upon an industrial chemical that's currently serving those markets, which is basically typically a more toxic or more corrosive material. And we've also found applications related to that in the purification of raw materials. And, again, it's the same point, that when you crush vegetable oil, there's also some co-products, and one of those are gums, and typically the gums don't secure the kind of value that they should because they're very high in nutrients, and so that's another co-product, not in biodiesel production, but in the crushing of oil that we'd like to see emphasized.

So in synopsis, we'd like to see co-products and biorefining getting an emphasis in future solicitations.

COMMISSIONER PETERMAN: Thank you. Thank you for the presentation and your comments.

MR. PEREZ: Russell Teal.

MR. TEALL: Good afternoon. My name is Russell Teall. I'm the President of Biodico, formerly known as Biodiesel Industries, but many of you probably know us as that. We went through a name change last year because our work with the Navy has evolved to the point where we're looking at not just biodiesel, but renewable jet fuel, as well. And so, when we look at the entire biomass portion, there's a lipid portion which can be converted into biodiesel. There's an oil extraction solids portion which can be gasified and turned in through a gas to liquid process, into a renewable jet fuel.

My comments today are somewhat limited. The benefits report, I very much like the portions that are focusing on the carbon intensity values for the Low Carbon Fuel Standard. I served on the Low Carbon Fuel Standard Advisory Committee for doing the updates last year, and one of the questions which came up was how much fuel do we need, you know, if we're going to meet this 10 percent reduction to regulated parties, you know, how many gallons do we need? And you know, the answer wasn't apparent, so we worked with staff over there and there's a spreadsheet that's available on the CARB website to look at how the carbon intensity, the fuel, affects the number of gallons it's going to take for compliance. And

if you use what I call an ultra low carbon intensity fuel, which is arbitrarily -- I set it at 20 grams of CO_2 equivalents per megajoule or less -- by 2020, 540 million gallons are needed just for the diesel replacement. So, you know, that's a very large task in a very short period of time, and so I really think that the focus, in large part -- I know this is a multifaceted program -- but the lower we can drive the carbon intensity of the fuels that are being supported by this program, the more likely we are to achieve those results. Probably one of the largest factors affecting the carbon intensity is derived from the feedstocks, and I very much agree with Simon's approach, that the more sustainable the feedstocks, you know, it's better for the environment, it's better for the carbon intensity, and so our focus as an industry in collaboration with government, has to be where are these feedstocks going to come from, what are they, what is appropriate for California? The work that Dr. Kaffka is doing is tremendous, the U.C. system is doing great work in this regard, and I would urge that more support be directed towards the feedstock question, and that's something that makes all boats float, you know, whether it's renewable diesel, biodiesel, biogas derived fuels, all those fuels need a feedstock and that's very essential to meeting the 2020 goals.

Probably the next biggest obstacle that I see is permitting. The CalRecycle has done a great job in terms of sponsoring a programmatic environmental assessment for biogas facilities, which makes it much easier to get a facility permitted. It doesn't guarantee it, it's not a substitute for the localization of that, but it provides a framework so that local regulators can look at it and say, "Okay, here's the guidance document, this is what are the impacts that we're expecting." And so, for the expansion and development of new projects, doing some sort of a programmatic assessment to the extent that it fits into one of the existing budget categories and can be part of a solicitation, I think that would do a lot for moving the industry forward.

Finally is the question of infrastructure. And I was surprised, as well, when there was $3.1 million for biodiesel infrastructure and only $1.1 million in projects coming through. And in looking at that, I think there's probably two or three factors, you know, that influence that. One is our industry went through a severe downturn, there was a lot of regulatory uncertainty at the Federal level as to what incentives were going to be available, but that's been resolved at this point, and the Low Carbon Fuel Standard is kicking in. As you know, it ramps up like a ski jump, you know,

a quarter of a percent, last year a half a percent, one percent, one and a half, and so, as this ski jump happens, we need to be ready to supply these fuels into the market. Biodiesel, just as an example, doesn't need new vehicles, doesn't need new fuel stations. You know, what it needs is space at the terminals, at the racks, where the fuel can be blended to whatever percentage is going to be required. At a 540 million gallon compliance level, that's a 12 percent blend of biodiesel, so that's well within what the OEMs are setting as a B20 limit for a lot of the warranties.

So what I would ask is that there be a reconsideration of the $2 million that is leftover, to reallocate it for infrastructure so that we can get these terminals involved in the process, putting these facilities, and as of April 14th of this year, the IRS was saying that there's 85 terminals registered in California for the distribution of fuel, so looking at those strategically, you know, we're the best ones for getting the greatest throughput of fuel into this market, I think is important, and that with a proper outreach program and the programmatic environmental assessment, you know, to help with the permitting process, you know, that infrastructure to be developed.

MR. PEREZ: Thank you very much. Matt Horton.

MR. HORTON: Good afternoon, Commissioners, staff, and Advisory Committee. I'm Matt Horton, CEO of Propel Fuels, glad to be here with you again today. Most of you will know that Propel is a leading retailer of alternative fuels here in the State of California, and you'll know us most likely for our sales of biodiesel and E85 Ethanol, which are the two products that we're offering today in California. But I also want to make clear that we are looking at all of these fuel types, EV Charging, hydrogen, and others, and are looking forward to putting those technologies into the market as the vehicle base continues to grow for those products.

But today I'm really here to talk about Ethanol for a few minutes and why, of all the fuel types that we see, we remain confident that E85 is one of the very best options for California today. I know there was a lot of concern in 2011 about the future for the Ethanol retail market with the expiration of Vtech, believe me, we were pretty concerned, as well. Our matching capital was sort of put on hold and our program slowed down a bit waiting to see how things played out. And I'm very pleased to say that the loss of the Ethanol tax credit was actually one of the best things that's ever happened to Ethanol at retail. This quarter has been, by far, one of our best quarters for fuel sales. Pricing in the market is quite

good today.

I wanted to talk about a couple of things, a couple of features about the market. As we're thinking about the categories of these alternative fuel infrastructure investments, again, we're very pleased to see there is a good investment amount for this category, but do have some issues with the allocation levels. One, I do want to talk about vehicles. The Flex Fuel Vehicle market is by far the largest and fastest growing vehicle market, Alternative Fuel Vehicle Market, in the State of California and in the country. Our estimates show that we are going to be at about a million flex fuel vehicles in California pretty soon. We've been dealing off of some outdated data in that regard for a number of years, but very fast growth in the vehicle base.

The number of models available doubled last year up to 72, so lots of models available, and one of the most important things that I do want to remind people, these are affordable vehicles. Unlike the electric vehicles and hydrogen vehicles that are going to be purchased by the wealthiest among us, these are vehicles that have no extra cost, the fuel is very low in cost, and this is a great product for all Californians, regardless of their income levels. And we see that at our stations; we pull a very broad demographic.

As I mentioned before, Ethanol pricing is more competitive than ever and we're passing that on to our customers, so our customers are getting great savings at the pump. Regarding performance, from just 20 stations that we've opened in California that sell E85, we have over 10,000 customers today. So for every one of these stations we open, that's about 500 people who have made a switch off of gasoline and onto an alternative fuel. And just to put it into context, you know, that's more than all of the hydrogen vehicles we have in the state, are served by just one of Propel's stations, so very strong customer uptick. And sales are again up almost 60 percent in volume from December, so it's been a great quarter for us.

Again, I want to reiterate, you know, we are as a company rolling out new Clean Mobility Centers, what we're calling them, that are going to integrate a number of fuels. We will be opening our first one of these in Fullerton in just a couple of weeks, very excited about that. But more than anything, I just want to send the message that Ethanol retailing, and E85, in particular, in California and nationally, is stronger today than it's ever been. We sell three times the amount of Ethanol per station at Propel stations than the national average, so California loves the product and we're doing something

right here.

A couple things that I want to just close by saying, so everybody I think has now seen that we've survived Vtech and the market is looking much better. What that means for us as a company is that funding is starting to come back into the market. In this first quarter, we received term sheets for $20 million in new equity funding, and $25 million of development capital. This is all contingent as match funding against the funds provided by AB 118. So the markets are paying attention and that's -- it's been good for us, people are becoming interested again in the E85 market. We are also moving forward on our development schedule, again, which is great news and, again, we will be opening our next site very soon.

So what does this all mean for this proposal? Again, having spent my career in venture capital, investing in clean energy companies, I can tell you the investment markets are watching the decisions that are being made here. Capital will flow toward the places that California is showing to have priorities, and like it or not, what we see here, this clearly is spelling out what the priorities are for the State of California in terms of funding and moving technologies into market. So, you know, I do want to say we believe E85 is a strong

product, customers love it, it's a great product for all of California consumers today, but we're having a very tough time explaining to the financial markets why this product that seems so great, from CO_2 reduction, petroleum reduction, the number of vehicles available, and the social equity components of it, why this is the category that is getting cut by 80 percent from historical funding levels, and why on this chart it is the lowest of the categories. So, today I would just like to urge everybody to really think deeply about this and it's our strong recommendation that we return E85 to its historic funding levels, and really put it back on par with other fueling types because, again, from a retailer's perspective who is interested in getting fuels into Consumers' vehicles, E85 is the best fuel in the state in the near term for reducing petroleum and CO_2 emissions. Thank you.

MR. PEREZ: Thank you, Matt.

COMMISSIONER PETERMAN: Thank you, that was helpful to have your comments. And just to place your comments also in context, it's my understanding that, in terms of the money you received so far to do station development, what percentage of those stations have you developed? And what percentage of that funding have you used?

MR. HORTON: We are, from our combined DOE and CEC funding, we're at about -- I think about 40 percent through the --

COMMISSIONER PETERMAN: Okay, so we're looking forward to seeing that 60 percent.

MR. HORTON: So are we.

COMMISSIONER PETERMAN: Okay, great.

MR. HORTON: Thanks.

MR. PEREZ: Okay. Rebecca Breitenkamp.

MS. BREITENKAMP: Good afternoon. My name is Rebecca Breitenkamp and I'm the President of Oberon Fuels. We are a San Diego-based company making dimethylether, or DME, as a cleaner alternative to diesel. So I submitted a document to the public docket, so I just want to briefly highlight the benefits of DME as a fuel, as well as the work that we specifically, Oberon, are doing in the San Diego and Imperial Valley area.

So just briefly, DME is a clean burning fuel, it's been used for decades elsewhere in the world, and has gotten traction with some OEMs such as Volvo Trucks, Isuzu, Nissan, Ino, and they've been looking at using DME, especially in the heavy-duty trucking industry. And so the benefits of DME, there's no particulate matter, no sulfur, it contains very low NOx levels, and it's

actually an excellent diesel fuel, so it has comparable thermal efficiency as diesel when run in a diesel engine.

Another advantage is we can actually use multiple feedstocks, so we can actually -- we need methane and carbon dioxide as our source to produce the fuel so we can use anything from pipeline natural gas to biogas, so looking at agricultural digesters, landfills, wastewater treatment plants, so there's a lot of opportunities to use different feedstocks and it could be either alternative or renewable fuel.

So, specifically what we are doing at Oberon, we are building our first production unit right now, Imperial Valley, California, we'll be producing fuel at the end of this year. We are also working on building in parallel a DME engine conversion business, so we are working with the OEMs producing new DME engines, but also looking at building these conversion businesses, as well. So what we are looking at as far as the advantages of our particular process is that, because we can do it on a small scale, so we have these skid mounted modular units, and so we can actually generate transportation fuel on-site where there is a methane source, so such as a dairy farm, or close to the pipeline. Another advantage is that we can take advantage of regional feedstocks. So a lot of times, some of these renewable feedstocks, they

don't have large enough volumes to be used in other processes, but because we are a small scale process, we can actually take advantage of these feedstocks that would otherwise not get used.

In addition to that, we're building regional markets, so by doing that we're lowering the transportation cost, that reduces the GHG impact on the community. And so what we're asking for from the Commission is inclusion in the upcoming investment proposal and future plans. So DME is actually listed as an allowable fuel under the original Assembly Bills in 118 and 109, and so we're asking, by including DME specifically in upcoming grant solicitations, that this would help us as we launch this fuel in the State of California, which would be leading the country in it. Also, looking at just expanding the definition, so we're not asking for additional allocations, we're just asking for actually expansion of the definitions of the current categories.

COMMISSIONER PETERMAN: And staff, correct me if I'm wrong, but I believe DME is eligible, but you're the first one to come with an interest in it. Is that correct?

MR. MCKINNEY: Sorry, Commissioner, I actually don't recall. Rhetta, do you recall what we did there?

COMMISSIONER PETERMAN: Uh huh, so happy to have you follow-up with our staff to make sure that you find the definition as inclusive, as it needs to be, and glad to see a company that's interested in doing this type of work, but it is eligible.

MS. BREITENKAMP: Wonderful. Thank you so much.

MR. PEREZ: Tom Fulks. Is Tom here? Tom Fulks? Okay, we'll go on to the next speaker, Andreas -- oh, you've already had Andreas -- Paul Staples, via WebEx.

COMMISSIONER PETERMAN: Mr. Staples, are you with us? All right, is Mr. Staples on the line? Paul Staples? We'll give him about 10 seconds.

MR. PEREZ: All right, Mr. Staples? Are you there? Why don't we go on to the next speaker and we'll return to Mr. Staples at the end. James Provenzano? Are you there, James?

MR. PROVENZANO: Good afternoon. Thank you very much. This is James Provenzano. I'm with Clean Air Now. And I want to thank the CEC staff and also Commissioner Peterman regarding the Investment Plan. The comments I've heard today, and also the fact that the Investment Plan is well balanced, and I think moving forward with the plan helps us move towards cleaner air

for all in the State of California, which is what our goal is, is to protect public health from air pollution, the effects on health from air pollution.

Some of the comments I've heard about hydrogen fuel cells, it makes me believe that people are unaware of how near term that these technologies really are, and you know, what the South Coast Air Quality Management District is doing with hydrogen fuel cells and the goals of the California Fuel Cell Partnership, and the plans of the OEMs to introduce these vehicles, it is imperative that the CEC continue their support for these technologies as allowing large numbers of zero emission vehicles to be put on the roads here in California. And I think these vehicles are ready to go, and the OEMs are ready to bring them to the California market. And as people look into what Germany is doing, what Japan is doing, what South Korea is doing, what Norway and now Denmark has announced the Hydrogen Highway effort, and Great Britain has a major effort that, by the CEC funding the infrastructure for these vehicles, hopefully one day increasing their funding for buying down the vehicles so people can get into them early on, puts California back into a leadership position and allows especially the domestic manufacturers, especially General Motors that are working on these drive trains, to compete on the

world market, and so that we don't have to look elsewhere for product that fulfills a need here. So I think the CEC staff and Commissioner Peterman obviously understand the value of these technologies, it is my hope that that information gets out to the public at large so there is greater support for the technologies and also for the CEC in their support for these technologies, so I just want to thank you for helping carry the torch on this, and your great work, and the money that you bring towards this so it's -- I'm very optimistic of what the future holds for all of us. So thank you very much.

MR. PEREZ: Thank you, sir. John Holmes. So, John, are you there? Okay, John, are you there? John Holmes from San Diego Gas & Electric, are you online? Okay, so maybe he's gone. Then I think we'll return to Mr. Paul Staples. Paul, can you hear us? Paul, can you hear us? Paul, if you can hear me, this is Pat Perez of the California Energy Commission, we cannot hear you, but if you can hear us, we'll follow-up with you, or please submit any additional comments you have to our docket and we'll consider any input you have. Okay, with that, let me ask if there's anybody in-house here that has any final remarks or comments, and who did not get an opportunity to provide input today. Anybody out there? Not seeing any, I will turn it back over to the

Commissioners for final remarks.

COMMISSIONER PETERMAN: I want to make sure that, Charles, at some point, or Pat, please make everyone aware again what our schedule is for the next week or two. Thank you all for participating, I found it to be a very valuable discussion. I mean, I'm heartened because I think it means that we got a lot of things right, and I also think it means there are a lot of things that are still to be determined and look forward to clarifying with all of you going forward about, obviously, where the need is, and how the State can participate.

I will say, as with every Advisory meeting I've been to so far, at the end of it now, my head is full and my stomach is empty, so I will not get in the way of us further following up, but I want to say a special thank you to staff for the tremendous work they've done. I mean, as they've been working on this -- yeah -- [Applause] -- because they have processed a variety and diversity of comments and tried to reflect them in a plan and, while doing that at the same time as getting out the existing solicitations. And that work doesn't stop. In addition, also, to other duties they have as a part of the Transportation Division here at the Commission. So I am impressed and thankful for their work, they make my

job easier. And with that, let me turn it over for any final comments from Chair Weisenmiller.

CHAIR WEISENMILLER: I will just echo your comments that certainly appreciate your activities, Commissioner Peterman, in terms of pushing this along, certainly Tim and the staff, generally, and appreciate the feedback from the Advisory Committee and also members of the public. So, thanks.

COMMISSIONER PETERMAN: And then final schedule.

MR. SMITH: So the final schedule, again, is that we will turn around --

[Adjourned at 1:21 P.M.]