BEFORE THE

CALIFORNIA ENERGY COMMISSION

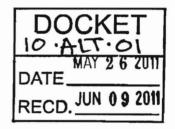
NATURAL RESOURCES AGENCY

STAFF WORKSHOP ON THE 2011-2012 INVESTMENT PLAN FOR ALTERNATIVE AND RENEWABLE FUEL AND

VEHICLE TECHNOLOGY PROGRAM

Docket No. 10-ALT-1

LONG BEACH CITY HALL COUNCIL CHAMBERS 333 WEST OCEAN BOULEVARD LONG BEACH, CALIFORNIA



THURSDAY, MAY 26, 2011

9:05 A.M.

CRIGINAL

Reported by: Martha L. Nelson, CERT 00367

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STAFF PRESENT:

Peter F. Ward

Charles R. Smith

Pilar Magana

PUBLIC SPEAKERS:

Joe Gershen, Crimson Renewable Energy Cindy Wilcox, Marine Bioenergy Incorporated Lee Harris, New Leaf Biofuel Gilbert Gallahar, UTR Plus Monty Campbell, Global Carbon Solutions David Busher, Compro Systems Christopher Perkins, Unimodal Systems

Index

Page

Opening Comments	
Peter Ward	4
Presentation	
Charles Smith	5
Public Comment	26
	70
Adjournment	70
Certificate of Reporter	71

1

25

PROCEEDINGS

2 MAY 26, 2011

9:05 A.M.

3 Good morning. I'm Peter Ward. MR. WARD: T'm the 4 program manager for the Alternative and Renewable Fuel and 5 Technology Program. And we're here today in Long Beach for 6 the first of two remote workshops that we're going to be 7 holding in this state on the program. We had an advisory 8 committee meeting last week with the current committee draft 9 of the investment plan. And so while we wait for everyone 10 to -- to linger and come into the room, we'll go ahead and 11 get started. I'm not sure if they are actually coming. So 12 thank you all -- all for coming.

And I'd like to introduce Charles Smith, who is the -- the -- the project manager for the investment plan this year. And with any luck we can have him be the project manager for the investment plan next year. He's doing such an outstanding job.

I think if you have had a chance to look at this document it is -- I think it's excellent. It's got an awful lot more information. Each year that we've done this it's gotten better and better. So this year I think we're -we're pretty well focused on a broad range of alternative fuels and vehicle technologies for development and important use in California.

> So also with us is Pilar Magana, and she's going California Reporting, LLC

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1 to be handling the WebEx for us. And she might be even 2 saying a few words later for us too. Who knows. 3 And basically I just wanted to welcome you here to 4 the -- to the workshop. And, yes, please, sir, come on in. There's --5 6 there's room. And -- yeah. 7 So I'd like to -- I'd like to introduce Charles 8 Smith. He is the -- the project manager for the investment 9 plan this year. Charles? 10 Thank you, Peter. Good morning, MR. SMITH: everybody. We have a few people joining us on WebEx, as 11 12 well, so welcome to you. 13 As Peter mentioned, this is our first of two 14 remote public workshops that we are doing as part of the 15 preparation of our annual investment plan. 16 Here's a brief meeting agenda, depending on --17 we'll see if we move through it, perhaps quicker than 18 anticipated. But I'm providing you a brief introduction and 19 program overview for these first few couple slides. Peter 20 will provide a program status update. That's just sort of a 21 history of the program thus far. And then after that I'll 22 be providing an overview of the contents of our committee 23 draft investment plan for fiscal year 2011-2012. And then 24 we have to adjourn by three o'clock -- sorry, after -- after 25 my overview we'll have -- we've reserved a lot of time for

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public comment on the investment plan. And then at three o'clock we have to adjourn because there is a meeting that needs to happen here at four o'clock.

So a brief recap of the program. This was established by Assembly Bill 118, also why it's called the AB 118 program sometimes, and it's administered by the Energy Commission. There's also a second component to AB 118 that's administered by the Air Resources Board called the Air Quality Improvement Program. It's well worth checking out if you haven't already.

11 The statutes of AB 118 were subsequently amended 12 by AB 109. And the emphasis of this program is to develop 13 and deploy innovative technologies that transform 14 California's fuel and vehicle types to help attain the 15 state's climate change policies.

16 We have a number of policy objectives that have 17 been established by the state that feed into our program. 18 GHG reduction; obviously we have targets to reduce GHG 19 emissions to 1990 levels by 2020, and 80 percent below 1990 20 levels by 2050. We have a petroleum reduction goal, 21 alternative and renewable fuel use goals, and in-state 22 biofuels production goals that also feed into the investment 23 plan.

This program has a sunset date of January 1st, 25 2016, and an annual program budget of approximately \$100

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1 million. The types of activities that we pursue are the 2 development, production, manufacturing, and deployment of 3 alternative and renewable fuels, advanced vehicles, vehicle 4 efficiency improvements for both on-road and non-road applications. We also take part in a number of non-hardware 5 6 activities, such as emphasizing workforce training and job 7 creation. We are interested in fostering education on these alternative fuels and technologies, promotion, and perhaps 8 9 the development of technology centers. And we also prepare 10 environmental market and technology assessments.

Briefly about the investment plan, we're required to develop and adopt an investment plan annually. The investment plan determines the priorities and opportunities for the program --

15 (Microphone feedback.)

MR. SMITH: Pardon the feedback. Pilar, is veryone muted?

18 MS. MAGANA: Yes.

19 The Energy Commission must MR. SMITH: Okay. 20 create and consult with an advisory committee meeting as it 21 develops its investment plan. As Peter mentioned, we had 22 the second advisory committee meeting earlier this week. 23 And we anticipate that that will most likely be the final 24 advisory committee meeting for this investment plan cycle. 25 I've also included at the bottom a quick link to the

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investment plan's website. This is where you can go to get
 information on meetings that we've held previously. The
 most recent version of the investment plan is available
 there.

5 So here's a recap of our anticipated schedule for 6 adopting this year's investment plan. On May 9th we posted 7 the current version of the investment plan, which is the 8 committee draft. We held our second advisory committee 9 meeting on May 23rd. Today we have our public workshop in 10 Long Beach. And June 1st, next week, we'll have a similar 11 public workshop in San Francisco.

12 In mid-June we hope to take all of the comments 13 that we have received from the second advisory committee 14 meeting from these public workshops and from our docket, 15 which is open for your comments, and pull those into our committee final version of the investment plan. On June 16 17 29th we have a commission business meeting, and we hope to 18 have the commissioners vote on and adopt the investment plan 19 on that date.

20 With that I'll turn the microphone over to Peter21 Ward for an update on our program.

22 MR. WARD: Good morning again. I've -- I've 23 enjoyed working on this program for the last three years. 24 And we're going to give you a little bit of a snapshot view 25 of what's happened in the past three years, but then with

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1 the focus on what's in the investment plan now, as well.

2 Here are the solicitations that we have run so 3 And I'll probably not go through each and every one of far. 4 these. These are available in the -- in the presentation 5 printed out front. But you can see here -- except that it's 6 covered up with the WebEx thing there -- \$156 million was available in the first year for different solicitations and 7 awards. And we have pretty much met all of those needs up 8 9 to -- up to this point.

10 The -- this is the -- the public agency agreements 11 that fills some of the remaining money, as well, workforce 12 training, fuel standards and development for hydrogen and 13 hydrogen retail fueling dispensers. Again, a plug-in Prius 14 demonstration with the Department of General Services, 15 light-duty electric vehicle deployment. We provided \$2 16 million to the ARB'S AQIP program for light-duty EVs.

17 We've provided \$4 million in an interagency 18 agreement to the Air Resources Board for medium- and heavy-19 duty truck electric vehicle deployment. We are working with 20 UC Irvine and their STREET modeling to take what they have 21 done in hydrogen in the Southern California area and apply their modeling techniques to all of California for all of 22 23 the alternative fuels. As we go forward, and we are under 24 contract with them now, they'll be developing and modifying 25 that model which was an excellent model for the hydrogen

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1 to -- across the state and all the alternative fuels. So
2 this is going to be a helpful tool, I believe, for the
3 establishment of infrastructure for alternative fuels. And
4 it's going to be done in a well-informed and timely manner.

5 National Renewable Energy Laboratory, we're --6 we're going to be striking an agreement, probably coming out 7 of the current year funding for their support for the 8 program and helping us identify trends and -- and needs for 9 future investment plans, as well.

10 And the hydrogen fueling station at AC Transit in 11 the Bay Area to cover some of their transit buses. They have 12 12 transit buses that were delivered this past year.

13 We've had 8 solicitations, 313 proposals were 14 reviewed, and that requested -- for the money that we had 15 that we had requested, \$1.2 billion. To say that 16 alternative fuel space is oversubscribed is an 17 understatement, and I think we know why. Many of the 18 reasons is the -- the high -- high gasoline prices. But you 19 know, there's the environmental disaster we had in the Gulf. 20 There's a lot of difficulties that we see going forward with 21 petroleum. And so this program has a portfolio approach to 22 using all of the alternative fuels to -- to reduce our petroleum and reduce our environmental impacts. 23

We're on track to meet the encumbrance and
 agreement developments -- development deadlines for all of

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the agreements for the first two fiscal years of the
 program, which were combined into one investment plan.

3 The current solicitations we have now is one that 4 is on the street currently, is moving fairly quickly, is the buy-down incentives program for natural gas and propane 5 6 vehicles. It was released on the 13th of April, and it will 7 continue until April of 2013 or when funds have been exhausted. The current amount for all of this solicitation 8 9 is \$14.54 million. And I believe that all the funds -- most 10 funds will be exhausted by a month from now, so far in 11 advance of the two years we had scheduled for the -- for the 12 solicitation.

But there is a good possibility that we will be adding funds to this in the future. It's proved to be a pretty flexible and a simple application process for people to -- for OEMs and their designated dealers and distributors to partake of incentives in our program.

18 It's broken out as \$2 million for propane school 19 buses, and \$2.3 million for light and medium natural gas, 20 \$2.35 million for light and medium propane, and \$7.8 million 21 for heavy-duty natural gas.

How it works is the original equipment manufacturers or their designated dealerships or distributors apply for the incentive reservations. They can apply for a certain number of those and a certain dollar

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1 amount. Once approved they are taken to a commission 2 business meeting for approval and encumbrance of those They have 120 days to -- to sell the vehicles. Once 3 funds. 4 they're sold, either by cash or a purchase order, they can claim the incentive back in a one -- in a one-page claim 5 6 form to the Energy Commission and we will schedule payment 7 from the Office of the State Controller for the incentives 8 that they would be claiming.

9 The first three business meetings, the next one 10 is -- the third one is May 31st, and at that point I think 11 we will have encumbered about \$10 million of the \$14.54 12 million for this. So in three business meetings we've been 13 able to advance this money quickly.

14 Here is the breakout of the incentive levels for 15 the gaseous fuel vehicles. Light -- you can see that it 16 ranges from \$3,000 to \$32,000 for the heavy-duty natural 17 gas. And propane school buses are included there, as well. 18 The current solicitations, we have the PEV, that's 19 the plug-in electric vehicle readiness. And that is a 20 program opportunity notice for -- for the -- the planning 21 and readiness functions that are necessary on a regional 22 basis for EV rollout, to make sure that we meet the -- the 23 needs as the vehicles that are rolling out, that we have

24 places to charge all those.

25

How it works, our applicants must develop a multi-

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stakeholder PEV coordinating council for their region, a minimum of four agencies. And they're first come-first served as long as applicants meet requirements. The maximum reward is up to \$200,000 per region, and up to \$1 million available, and may be supplemented based on demand.

6 Anticipating upcoming solicitations. These are scheduled I think from the -- for the summer and fall: 7 8 medium- and heavy-duty demonstrations; electric drive and 9 gaseous fuels, \$15.9 million; hydrogen fueling, we have 10 \$10.2 million available; biofuel and renewable natural gas 11 production and feasibility, \$36 million; alternative fuel 12 infrastructure, \$29 million; innovative technologies and 13 federal cost sharing and market and program support. That's \$106.8 million for the allocation of this -- this -- or last 14 15 fiscal year. And this is the -- the end.

16 This is -- this is your part, huh? Charles is 17 going to take you through the input and comments we received 18 thus far on this investment plan.

Just so you know our process, the first workshop was for the staff to present its draft of the investment plan. And as Charles corrected me, it was earlier this week -- it seems like last week, but it was earlier this week -- we had our advisory committee meeting, an that is for the committee draft. That's our Transportation Committee comprised of Vice Chair James Boyd and Carla

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Peterman, our newest commissioner at the Energy Commission,
 and they presided over that -- that meeting. We've got
 several comments. We're -- our docket is open, but Charles
 will tell you much more about that right now.

5

MR. SMITH: Thank you, Peter.

6 So the primary purpose of this slide is just to 7 give you a sense of all of the excellent input and comments that we have received during the development of this year's 8 9 investment plan. At our first advisory committee meeting on 10 March 7th we had 15 advisory committee members present, 11 representing a mix of -- of alternative fuel vehicle 12 providers, non-governmental organizations, fellow state 13 agencies, a broad array of members.

14 We also had 25 organizations and individuals 15 providing comments at that first advisory committee meeting. We have had more than 50 organizations and individuals 16 17 submit comments to our investment plan's public docket thus 18 If you haven't yet I strongly encourage you to do so, far. 19 if possible, by June 3rd would be the ideal deadline for 20 additional items to the docket that would allow us 21 sufficient time to review and incorporate the comments as 22 appropriate into the investment plan. We had additional 23 advisory committee input and outside organization input at 24 the second advisory committee meeting earlier this week. 25 A brief overview of the investment plan. This

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investment plan, as the previous ones did, outlines the
 funding allocation for the particular year. We anticipate
 \$100 million in revenue for the program this year. This is
 spread across 18 funding categories in 12 fuel types and
 other activities.

6 The methodology of the investment plan is also 7 similar to previous investment plans. We look at the GHG reduction, petroleum reduction and market potential for 8 9 various alternative fuels and vehicle technologies. We 10 identify the barriers to greater adoption of these fuels and 11 technologies. We look at what activities are already being 12 undertaken by others, be they in the private industry, at 13 the federal level, our sister state agencies. We look at where our funding can have the biggest impact. \$100 million 14 15 sounds like a lot and it is a lot. But compared to the 16 amount of money that Californians spend each year on fuel, I 17 believe it's correct that \$100 million is close to what 18 Californians spend per day on fuel. So --

19 MR. WARD: It's \$150 million a day.

20 MR. SMITH: Is that right? Okay. So \$100 million 21 is a lot, but at the same time it's kind of a drop in the 22 bucket, as it were. So we have to look at where we can have 23 the biggest impact.

24 We take into consideration short-, medium- and 25 long-term opportunities to meet our program goals. And we

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also consider non-fuel and vehicle needs, such as workforce
 training, standards development, market development,

3 etcetera.

4 The investment plan is broken down by alternative fuel vehicle sections. The first section is plug-in 5 6 electric vehicles. So in the immediate we see plug-in electric vehicles, the demand for these vehicles exceeding 7 the available supply, which is certainly encouraging for 8 9 what we would like to see. The state has established a 10 plug-in electric vehicle collaborative to help coordinate 11 the state's preparation for these vehicles across all fronts 12 ranging from transmission and distribution support to 13 ensuring early customer education to ensuring the early marketability of these vehicles. 14

The Air Resources Board provides incentives for light-duty plug-in electric vehicles through it's clean vehicle rebate program. And their most recent funding plan indicates that they -- they continue anticipating to fund that program for the next fiscal year.

20 On the subject of batteries, the federal 21 government has invested about \$2 billion into this activity, 22 so we didn't feel that adding our own smaller allocations 23 would necessarily have a tremendous affect in that regard. 24 So when we take all that aside we see that there 25 are still two activities that are expected to be hurdles for

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1 plug-in electric vehicles, unless we can address them early 2 on. The first is a regional PEV readiness plan. This is 3 for \$1 million. Peter mentioned that we had already 4 issued -- that we already have a current solicitation for 5 regional PEV readiness. This would supplement that funding.

6 And we have also allocated \$7 million for charging 7 infrastructure of plug-in electric vehicles. In a previous iteration of this plan that \$7 million was broken down into 8 9 several subcategories, but we continue to receive new 10 information on what kinds of infrastructure are the most 11 critical. And so we decided that it would be better to keep 12 it together as a single \$7 million sum as we develop new and 13 more information about whether what we need is support for residential charging or public charging or DC-fast charging. 14 15 So if you have input on that we would certainly encourage 16 that, as well.

For hydrogen, we each year have conducted a survey of automakers jointly with the Air Resources Board on the number of fuel cell vehicles that they plan to introduce in the coming years. Based on the survey data we see a steady increase in certain areas of the state, particularly around Los Angeles and Orange County. The automakers'

23 commercialization plans center on 2015 as an anticipated 24 widespread commercialization date. This -- by the 2015 to 25 2017 period they anticipate rolling out a little more than

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50,000 vehicles. So our goal is to provide a sufficient
 springboard for those deployments.

This \$8 million fueling infrastructure allocation will probably be paired with the \$10.2 million that we have for fiscal year 2011 that was mentioned on one of the previous slides, and that solicitation should be coming out this summer of fall.

8 We've also reserved in our investment plan the 9 possibility of taking some of this \$8 million in funding and 10 applying it towards a fuel cell transit project, akin to 11 what we have planned for AC Transit in the Bay Area. This 12 project would probably be somewhere in the South Coast 13 region.

I see a quick question. I think we're going to maybe stick to very quick clarifying questions if you have one.

MR. GALLAHAR: (Off mike.) (Inaudible.)
(Colloquy Between Staff and Court Reporter)

MR. SMITH: Maybe we should -- yeah, you'll have to hang on. Thank you.

The next category discussed in the investment plan is natural gas. We've seen natural gas play a significant role in the medium- and heavy-duty vehicle sector. We'll discuss this more in the section of the investment plan that focuses on medium- and heavy-duty vehicles.

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1 But it's just worth pointing out that we've gone 2 from having approximately 2,000 medium- and heavy-duty 3 vehicles in the year 2000 to having more than 12,500 medium-4 and heavy-duty vehicles in 2009. Obviously, that's a very 5 direct petroleum reduction. And as -- as diesel prices 6 increase, natural gas prices have increased a bit but have 7 remained a little more steady. That's also an increasingly more cost effective option for certain fleets. 8

9 For the broader natural gas industry we see that 10 natural gas reserves are relatively high, and as a result 11 prices are lower than diesel. We see an increasing number 12 of fleets, as I mentioned, turning to natural gas, both to 13 reduce long-term costs but also to meet local air quality 14 standards.

One thing that we find, however, is that infrastructure for these vehicles is limited. And we see a need to match the needs of fleets that are converting from diesel to natural -- to compressed natural gas and to LNG, to liquefied natural gas. We need to be able to match their transitions to alternative fuels with infrastructure investments.

22 Moving now to propane, we see an increasing number 23 of ARB certified vehicles, light-duty vehicles. Our funding 24 allocation will provide support for light-duty -- for the 25 light-duty propane portion of the gaseous fuel incentive

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that Peter mentioned earlier. This should provide enough
 funding to hopefully move us through June of 2012.

We've also put in an allocation for fueling infrastructure for propane vehicles of \$500,000. This is to establish a network of roughly ten key stations along the I-5 corridor in Northern California. Propane is a good alternative fuel for rural areas, and we intend to take advantage of that in Northern California.

9 Moving to gasoline substitutes -- or to back up, 10 the next few slides all deal with biofuels, which is a 11 single larger section of the investment plan. New to this 12 year's investment plan we've incorporated a lot of new 13 information on feedstocks, particularly waste-based feedstocks. Table 20 in the investment plan has a table 14 15 that outlines the approximate volume and feedstock potential of the waste-based feedstocks available in the state. 16

17 The first fuel type within the biofuels section is 18 gasoline substitutes. The major focus of this section is on 19 ethanol, which is certainly the most prominent qasoline 20 drop-in fuel additive. But we have expanded it beyond just 21 ethanol to note that we are encouraging other drop-in 22 gasoline substitutes that are perhaps fungible with gasoline 23 for our production incentives. We've allocated roughly \$7.5 24 million towards advanced ethanol and gasoline substitutes 25 production within the state. We expect these to be a major

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factor in meeting many of our state alternative fuel use and
 GHG reduction goals, simply because of the volume of fuel
 that each of these projects can produce.

On the vehicle side, the vehicle cost, the incremental vehicle cost of a flex-fuel vehicle, that is a vehicle that is capable of also using E-85, an 85 percent blend of ethanol, is relatively minor. The larger issue for E-85 is the availability of E-85 dispensers and retail outlets. And for that purpose we had allocated \$4 million in the investment plan.

11 The second fuel type discussed in the biofuel 12 section are diesel substitutes. This includes both 13 biodiesel and renewable diesel. Biodiesel is certainly the 14 larger share of this at the moment. However, we note that 15 there are some engine concerns with -- that automakers and 16 engine makers have with biodiesel. It also requires a 17 separate infrastructure from conventional diesel as it moves 18 into -- as it moves into vehicles' fuel tanks.

19 Renewable diesel, on the other hand, is fungible
20 with conventional diesel, meaning that we do not anticipate
21 similar engine concerns, and the need for separate
22 infrastructure is not as significant.

23 So for this category we've allocated \$7.5 million 24 for diesel substitutes production within California that 25 will be open to both biodiesel and renewable diesel. We

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will certainly be encouraging projects that utilize waste based feedstocks, in part because these tend to be the
 projects with the lowest greenhouse gas emission numbers.

The third and final fuel type in the biofuels sections is biomethane. We have allocated \$8 million for pre-landfill biomethane production. This is a very low carbon feedstock. We have seen a lot of interest in these types of projects, as exemplified by both the quantity and quality of the projects -- of the proposals that we received for -- in our first solicitation for biomethane projects.

Biomethane can be used, of course, as a substitute for natural gas in medium -- light-, medium- or heavy-duty natural gas vehicles. It can also be used in the production of electricity which can power electric vehicles. It can also be used as a feedstock for hydrogen VSD methane reformation. So there are a lot of avenues that biomethane could take in our transportation sector.

18 For medium- and heavy-duty vehicles this was 19 separated for the first time in this investment plan. 20 Previously it was discussed a little bit in each fuel type 21 section. But we felt that the distinct and unique 22 applications of medium- and heavy-duty vehicles warranted 23 discussing them separately from individual fuel types. 24 These vehicles represent about 4 percent of the --25 of California's vehicles, but they consume 16 percent of

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1 California's fuel and produce approximately 16 percent of 2 the GHG emissions from the transportation sector. So these 3 are an excellent opportunity for early action in vehicle 4 incentives. Towards that end we've allocated \$11.5 million in deployment incentives for natural gas vehicles, and \$3 5 6 million for what should say here deployment incentives for 7 propane vehicles. These will likely be -- these funds will likely be used to supplement the gaseous fuel incentive that 8 9 Peter mentioned earlier.

10 A lot of these alternative fuel options are 11 approaching parity with diesel for certain vehicle 12 applications. The goal is to encourage a three-year payback 13 period, which we have heard from a lot of fleets as the sort 14 of deciding criteria about whether they switch from diesel 15 to an alternative fuel.

We've also allocated \$7 million to develop and 16 17 demonstrate advanced technology medium- and heavy-duty 18 vehicles. These vehicles are starting to enter the market. 19 The Air Resources Board's Hybrid Voucher Incentive Program 20 provides up to \$40,000 as a deployment credit for these 21 vehicles. However, there's also a need to demonstrate the 22 applicability of new technologies for specific medium- and 23 heavy-duty vehicle niches. And so that is what our funding 24 will go towards.

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Innovative technologies, advanced fuels, and

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1 federal cost sharing, there's a wide array of opportunities 2 that are difficult to foresee, and they don't always fall 3 into the categories that I've mentioned thus far. We like 4 to reserve a little bit of funding each year to capture 5 those opportunities as possible.

6 One new option that we have been considering is a 7 small grants program. This might be similar to the Energy Innovation Small Grants that is run by our sister program in 8 9 the Energy Commission, the Public Interest Energy Research 10 Program. Under the Energy Innovation Small Grants Program, 11 for example, a maximum of \$95,000 is available for hardware 12 projects, and \$50,000 is the maximum available for modeling 13 projects. So that's one opportunity that we will consider. 14 Manufacturing. This in previous years was grouped

15 in with our electric vehicles section. But we realized that 16 the manufacturing of other alternative fuel vehicle and 17 vehicle components is just as valuable to their deployment 18 in California, so we've expanded it beyond just electric 19 vehicles.

20 California has an excellent -- we've attracted a 21 lot of venture capital for our ideas. But now we need to 22 get these ideas to be developed and manufactured in the 23 state. And so for that purpose we're allocating \$8 million 24 toward manufacturing facilities and equipment.

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Under workforce training and development we have

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1 partnered with the Employment Development Division, the 2 California Community College system, and the Employment 3 Training Panel, and we are providing funding primarily for 4 workforce training and development delivery, \$6 million. And we based that on significant demand that we have seen 5 6 for additional training opportunities. We've also allocated 7 smaller sums of \$250,000 for both workforce training and development outreach and for dedicated clean transportation 8 9 and workforce needs studies.

10 The final category in our investment plan is 11 market and program development. This is where we provide 12 funding for activities that don't directly apply to the 13 deployment of alternative fuels and vehicle technologies, 14 but they are critical to the success of both our program and 15 to the wider adoption of alternative fuels and vehicles.

The first allocation is for \$1.5 million for 16 17 sustainability studies. This has, in the past, largely gone 18 toward the -- studying the opportunities and the potential 19 negatives of biofuels that we identify for our -- for our 20 other funding activities. We have allocated \$4 million for 21 technical assistance and analysis, and \$3 million for measurement, verification, and evaluation of the individual 22 23 projects of our program.

24 So that concludes my presentation on the contents 25 of the investment plan. This final table here is just a

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1 summary of the funding allocations.

And with that, the next item on our agenda would be public comment. Upstairs I -- if any of you noticed there is a small stack of blue cards. I don't know if anyone perhaps noticed and filled one out. But I know that we do have a couple of presentations that were requested. So I think the best way to proceed is if you have filled out one of those blue cards perhaps you could pass it to Pilar.

9 Otherwise, I know that we also received a request 10 to provide a presentation from Monty Campbell, if he is 11 here. I don't see him yet. He's indicated that he might be 12 a little bit late in arriving.

Does anyone have any blue cards that they have filled out? I see a couple of people filling them out now. So perhaps we'll take a minute. If anyone has any clarifying questions about the investment plan, perhaps you could come up here and we can address those before going into other deeper public comments. Okay. I don't see any requests for clarifications.

Is there anyone who has a public comment? Please
stand or -- yes, sir. Just speak into the microphone.

22 MR. GERSHEN: Sure. Just get some glasses. Hi. 23 Thanks for the opportunity to speak. My name is Joe 24 Gershen. I'm with Crimson Renewable Energy.

We have a 25 million gallon premier multi-

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1 feedstock biodiesel plant in Bakersfield coming online next 2 month, actually in about two or three weeks. Our focus is 3 on low carbon waste feedstocks. We're currently providing 4 about 25 to 30 California green jobs producing ultra-low 5 carbon biodiesel fuel. We'll spend approximately \$45 6 million to \$50 million in the California economy, not 7 including employment.

8 Personally, I've been in the biodiesel industry in 9 California for about ten years now. Biodiesel is still, we 10 think, the best low carbon fuel solution. And we're finally 11 seeing some real traction in the industry, both in the state 12 and in the -- in the country. It's a drop-in fuel and it's 13 available and ready for prime time today.

14 Crimson has invested tens of millions of dollars 15 and could use some support from the state. We have the 16 financial wherewithal and economies of scale to give you a 17 strong return on your investment. But please, what we 18 really are asking is that you stick to what you said you 19 were going to do originally, and let me explain that.

After two horrendous economic years the biodiesel industry is making a dramatic rebound. And those economic years really were for the whole country. But California lags behind the rest of the country because of infrastructure and regulatory uncertainty. Good -- we've been getting good federal support under RFS2 mandating about

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800 million gallons a year of biodiesel this year, and about
 a billion and beyond in 2012 and beyond.

3 The fuel quality is currently very five. B-5 is 4 included under the ASTM D975 diesel specification. B-5 and B-20 and even higher blends are -- have been okayed by many 5 6 of the engine manufacturers. Obligated parties, such as 7 refiners, are indicating a desire to blend in mandated states so they can double-dip, effectively getting credits 8 9 for RSF2 and for state mandates. And that provides 10 potentially a great opportunity in California to lower its 11 carbon intensity.

12 Recycled B-5 or B-5 made from -- or 5 percent 13 blend of biodiesel made from recycled feedstock, such as Crimson will be producing, provides a 4 percent carbon 14 15 intensity reduction, which is equivalent to about 160 16 million per year market opportunity here in California. 17 Recycled biodiesel at a 20 percent blend provides 15 to 18 percent CI reduction, which is equivalent to about 640 18 19 million gallon per year opportunity in California to lower 20 its emissions.

There is some concern that's been voiced about NOX emissions, but those can be mitigated by current SCR technology available on all diesel, new diesel engines, and many since 2007. There's also NOX additives that reduce it at low-blend levels, NOX2 to neutral or lower than diesel

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1 emissions standards.

2 As an example of carbon reduction potential, 3 assuming electric of hydrogen fuel cell vehicles displace 4 roughly 425 gallons of petroleum fuel per year and 2.5 metric tons of greenhouse gases, Crimson's 25 million gallon 5 6 per year biodiesel plant will have the same annual petroleum 7 displacement of about 60,000 EVs or hydrogen cars. At approximately 10,000 EV sales per year estimated, this is 8 9 equivalent to 6 years of EV sales for every year of 10 Crimson's production.

11 The CEC is sending some mixed messages. And 12 specifically in the 2009 Integrated Energy Policy Report 13 recommendations specific to biofuels, on page 244, and I 14 quote,

15 "To maintain energy security state and local agencies 16 need to ensure that there is adequate infrastructure 17 for the delivery of transportation fuels. The state 18 should modernize and upgrade the existing 19 infrastructure to accommodate alternative and renewable 20 fuels and vehicle technologies as they are developed to 21 address petroleum infrastructure needs, to preserve 22 past investments, and to expand throughput capacity in 23 the state."

24 You also went on to say,

25 "The Energy Commission will collaborate with partner

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agencies and stakeholders to develop policy changes to
 address regulatory hurdles and price uncertainty for
 alternative fuels, particularly biofuels in
 California."

5 And you went on to say, 6 "California should support the development of 7 alternative and renewable fuels that can provide 8 immediate greenhouse gas emission reduction benefits 9 and a bridge to the introduction of fuels that will 10 result in deeper greenhouse gas emissions reductions in 11 the future."

12 And in the 2009 IPR under the Transportation 13 Energy Forecast and Analysis on page 120 and 121 you said, "Currently the biodiesel infrastructure is inadequate 14 15 to accommodate widespread blending of biodiesel even at 16 concentrations as low as B-5. However, with sufficient 17 lead time, 12 to 24 months, modifications could be 18 undertaken and -- and completed to enable an expansion 19 of biodiesel use."

20 So the question I have is: Why are you not being 21 consistent? And by that, I mean, you've pulled \$4 million 22 in funding for renewable and biodiesel and diesel 23 substitutes from the -- the current budget. And I'm 24 wondering, why are diesel substitutes the only alt fuels 25 that the CEC is not providing infrastructure support for in

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1 the investment plan?

There's a serious lack of infrastructure and that's holding back the market for diesel substitutes in California. Rail infrastructure, terminal storage infrastructure, rack blending infrastructure, and underground storage tanks repair and upgrades are all affected. Biodiesel and renewable diesel will both benefit from state funding support.

9 Crimson, for example, has three terminal projects 10 teed up currently and could much effectively and 11 competitively bring its fuel to market with a comparatively 12 minor investment from the CEC. Our current terminal efforts 13 are expensive and inefficient compared to petroleum 14 infrastructure.

15 I've personally seen many public and private fleets discontinue biodiesel use due to a combination of the 16 17 USD issues and pricing in this bad economy. Much of this 18 could be resolved with the -- with the infrastructure 19 investment you indicated you would do back in 2009. We can 20 not do it all ourselves. Please reinstate the \$4 million in 21 infrastructure funding for diesel substitutes. Thank you. 22 MR. WARD: Thank you.

23 MR. SMITH: Anyone else?

24 MS. WILCOX: Blue cards this way? Hi. My name is 25 Cindy Wilcox. I'm with Marine Bioenergy Inc. And I wanted

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to thank the commission and the staff for bringing the
 workshop to Southern California and to Long Beach today.

3 I first wanted to acknowledge that microalgae, 4 which is seaweed, is now noted in the draft plan on page 84, 5 and that's a huge success. This is a potential biomass 6 feedstock, a purpose grown crop. With our major coastline 7 along California we have the perfect setting to become the home base of an extensive industry based on open-ocean 8 9 farming of kelp. Kelp could be an abundant biomass 10 feedstock.

11 Most renewable energy concepts can not scale to a 12 sufficient level of output to meet the current and future 13 need for carbon neutral fuels. Growing kelp in the open ocean is one of the very few renewable energy concepts that 14 15 can meet that need. Kelp is an ideal feedstock. It does 16 not compete with conventional agriculture for land 17 allocation. It doesn't need fresh water. It doesn't need 18 fertilizer. And better yet, our own California Giant Kelp 19 is one of the fastest growing plants in the world at 30 20 centimeters a day with average photosynthetic efficiency of 21 aquatic biomass at 6 to 8 percent, much higher than our 22 traditional terrestrial biomass at 2 percent. Kelp has no 23 lignin, very little cellulose, and can be readily processed 24 into gas or liquid fuels.

25

Marine Bioenergy Inc. is working with a

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1 consortium of major universities to run pilot programs and 2 retire risks. This consortium includes California 3 universities here in Southern California, UCLA, USC, and 4 other. This consortium is -- is known as the Southern California Marine Institute and is located just a few miles 5 6 from here on Terminal Island. They bring 25 years of 7 experience in marine biology, along with research vessels, wet labs and, most importantly, graduate students. 8

9 So analysis indicates that open-ocean farming can 10 be done economically, but the risks need to be retired. The 11 oceans are large enough that kelp can potentially provide 12 sufficient carbon-neutral biomass feedstock to provide 10 13 billion people, that's billion with a b, with more than the 14 average per capita total energy used by Americans today.

15 It is in California's interest to fund this 16 effort. With this new industry California can become self-17 sufficient in renewable energy. And as commercial 18 quantities ramp up California can become a renewable energy 19 exporter in the U.S., and perhaps for the rest of the world.

20 We request that the commission craft future 21 solicitations so that open-ocean farming can be judged on 22 fundamental issues of scalability, non-competition for fresh 23 water and land, and cost. We think that kelp as a biomass 24 feedstock will be important to the future portfolio in 25 California. And thank you for this opportunity.

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May I answer questions or is this an interactive opportunity?

3	MR. WARD: This is an interactive opportunity,
4	absolutely. Thank you for your presentation. Very
5	interesting, I have to say. I think this is one of the
6	one of the aspects that we we would consider in the
7	innovative technology section of our funding plan.
8	MS. WILCOX: Right.
9	MR. WARD: We have always evaluated, and either
10	it's in the feasibility or production, all of the different
11	impacts. And so obviously water in California is key. And
12	this doesn't use fresh water, so that's that's a definite
13	plus going in. So the attributes of this seem to be very
14	pronounced. And I think it would it would compete very
15	well in the innovative category when we when we do a
16	solicitation.
17	MS. WILCOX: Okay. So California does release
18	solicitations
19	MR. WARD: Uh-huh.
20	MS. WILCOX: the Energy Commission, under the
21	innovative budget?
22	MR. WARD: We will. We haven't.
23	MS. WILCOX: Okay.
24	MR. WARD: I don't think we have done that yet.
25	We've

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1

MS. WILCOX: Okay.

2	MR. WARD: We've had a legal difficulty figuring
3	out how to do a set of excellence, for example. But I think
4	we're coming coming to a conclusion to see if we can come
5	up with a solicitation for the innovative category. My
6	personal feeling as a Native Californian is that we need to
7	do this. California, really, we really do need to seed our
8	own state for some of these good ideas and innovations. We
9	have a long legacy of that. So
10	MS. WILCOX: Exactly.
11	MR. WARD: I'm happy that you came, and thank
12	you. It was very instructive.
13	MS. WILCOX: Right.
14	MR. WARD: And I think in the future we'll see a
15	lot more of this, and I hope so.
16	MS. WILCOX: Well, I'm on the email list, so I'll
17	be watching.
18	MR. WARD: Great.
19	MS. WILCOX: All right.
20	MR. SMITH: I have a follow-up question.
21	MS. WILCOX: Yes. Yeah.
22	MR. SMITH: There's a lot of discussion about
23	kelp, of course, as a feedstock. But I didn't I don't
24	see much information on transitioning from the feedstock
25	side to the fuel processing side. Is there a particular

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1 pathway that you envision or --

2 MS. WILCOX: The -- the U.S. Navy researched this 3 extensively in the 1970s during the energy crisis. And 4 their preliminary research showed that kelp converted very efficiently into, you know, basically biogas and could be 5 6 scrubbed, and that that was very efficient. But in the meantime we are in contact with people 7 in Santa Barbara at GRT Inc. and University of Nevada at 8 9 Reno, and they are looking at systems to go to liquid fuels. 10 So depending on process --11 MR. SMITH: Right. 12 MS. WILCOX: -- catalysts and so on --13 MR. SMITH: Sure. 14 MS. WILCOX: -- various efficiencies, I would say 15 those have not been as well researched. 16 MR. SMITH: Uh-huh. 17 MS. WILCOX: Mostly kelp was looked at in the 18 '70s, the Mobil Oil conversion system, things like that. 19 But -- but we need to update that, as you --20 MR. SMITH: Right. 21 MS. WILCOX: -- as you point out, and that's going 22 to take money. 23 MR. SMITH: Okay. 24 MS. WILCOX: So there a couple of steps here. But 25 it's a really promising feedstock.

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1

MR. SMITH: Okay.

2 MS. WILCOX: And so I appreciate that. And we're 3 looking forward to submitting a proposal so that we can 4 outline all the possibilities.

5 MR. SMITH: Yeah. I was just wondering, because 6 we -- in addition to the innovative technology side we also 7 do solicitations for straight biomethane production for 8 advanced ethanol or gasoline substitutes and diesel

9 substitutes production. So I --

10 MS. WILCOX: Right.

MR. SMITH: I just wasn't sure if your concept would fall into any of those or if that's not quite where you are right now.

MS. WILCOX: I think in order for us to respond to that we would respond to one of those through a fuel conversion group --

17 MR. SMITH: Right.

18 MS. WILCOX: -- in other words, at Santa

19 Barbara --

20 MR. SMITH: Right.

21 MS. WILCOX: -- or -- so that they would be 22 presenting a fuel; we'd be the feedstock.

23 MR. SMITH: Sure.

24 MS. WILCOX: And that -- and it would be -- it 25 would be a partnership proposal, which we'd be thrilled to

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1 do --

2		MR.	SMITH:	Okay.
3		MS.	WILCOX:	and would love to pull that
4	together.			
5		MR.	SMITH:	Okay. Yeah.
6		MS.	WILCOX:	So okay. Thank you very much.
7		MR.	SMITH:	Thank you.
8		MR.	HARRIS:	Good morning.

-

9 MR. WARD: Good morning.

10 MR. HARRIS: My name is Lee Harris, and I'm from 11 New Leaf Biofuel. We are the only San Diego County based 12 biofuels company. And essentially we take both feedstock, 13 as well as waste vegetable oil collected from restaurants 14 and hotels, and convert it into clean burning diesel.

15 This -- the cuts in funding are of significant 16 concern to us. Because what we've seen is, you know, at the 17 most recent ACT Expo we were the only biofuels 18 representation there. Everyone else was CNG.

Now while we value CNG as a technology, we found that there are a number of smaller companies who can't make the conversion, even with the -- the incentives, to go directly to CNG. For example, a lot of construction and grading companies have onsite aboveground storage. But to replace all of their -- many of their vehicles can not be converted to CNG, so they need to run on clean burning

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diesel. But because there's little support from public policy they're like, well, gees, how much change does that have to make, plus we've got to do all of the upgrades to meet the fire standards, and there's no funding that will help us, you know, do some of this.

6 So with that being a major part, the second part 7 would be the next target for our fuel would be small fleets like laundry dry cleaners and linen companies. Those folks, 8 9 on the other hand, would have to look at some major costs up 10 front to replace their fleet to run on CNG. And while we 11 in -- in some ways we compete with CNG, in other ways we can 12 also be an interim step to companies who either do nothing 13 and stay on traditional diesel with all of the negative 14 impacts who aren't ready financially to move to CNG, we can 15 be an interim step that has a lower cost than a drop-in 16 solution.

17 So when the company was founded eight years ago we 18 wanted to be able to do something in that region to make a 19 difference, both economically -- we currently employee 28 20 people at our plant. But we've also found that through the 21 Economic Development Agency that we have a much bigger 22 footprint because we're producing and selling over two 23 million gallons, you know, of fuel per year. So there's a 24 significant impact there.

25

Our goals, we've been able to weather the economic

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1 storm and survive. We've been able to wait until the tax 2 credit was passed. And you know, we had almost over 3 \$500,000 tied up in that. So financially we feel like we've 4 had to make investments to make this happen and we're 5 getting little support from the government agencies, 6 especially when the funding is being pulled back.

7 Our next step to support our -- our goals is to look at offsite storage, as well as blending, because no one 8 9 else is doing it. And if we're going to get adoption and 10 have an impact on the clean air in San Diego County and in 11 Southern California as a whole that's the next step, is to 12 build the infrastructure and give these people who are 13 converting some confidence that they're going to get some 14 long-term support.

So for that we would ask that the commission
seriously consider maintaining current funding levels for
biofuels. Thank you.

18 MR. WARD: If I could ask you a question, Lee.
19 MR. HARRIS: Yes, sir.

20 MR. WARD: The specific funding need that you have 21 is in, you say infrastructure. Are you talking about the 22 storage and blending facilities?

23 MR. HARRIS: Yes. Well, specifically the -- when 24 people convert their issue is they either have to have 25 underground storage, which the large companies, the Cokes,

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1 the Pepsis and the whatnot do, or they have to have 2 aboveground storage that complies with fire code and other 3 civil code standards. So the end user doesn't have any 4 additional support to say transition and we can help, you know, you financially weather that storm --5 6 MR. WARD: Uh-huh. 7 MR. HARRIS: -- or here are the various plants 8 where you can do your own offsite fueling by going to say a 9 propel fueling station or other car lots that are available. There's very little of that in comparison to CNG 10 11 opportunities. 12 MR. WARD: Uh-huh. Are you speaking of B-5, B-20? 13 MR. HARRIS: Yes, B-5, B-20. 14 MR. WARD: Okay. And then B-20, of course, has 15 that waiver right now with -- with the Water Resources 16 Control Board for about another year, is that right, 17 until --18 MR. HARRIS: Well, that's the problem, though; 19 right? Because what's happening, what we're finding when we 20 meet with these clients if they're saying, well, yeah, but 21 for how long, and then what happens after that? And so 22 there just is less confidence. 23 And it may -- part of it may simply be a PR issue. 24 Because there's so much money and press going towards CNG 25 people are just seeing this as kind of a suspect. Okay. So

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1 we get it now, we make this commitment, and then next year 2 what happens? And then -- you know, so it's hard for us to 3 make a plan to strategically go after these companies 4 aggressively when we don't know what the ultimate outcome is 5 going to be.

6 MR. WARD: Uh-huh. I was going to maybe ask the 7 same question. What is happening? Do you know if the 8 industry is seeking third parties for verification on the 9 underground storage tanks for B-20?

10

MR. HARRIS: No, I don't.

11 MR. WARD: Okay. And it's my understanding that 12 the biodiesel industry was taking that up. In the three 13 years that the California Water Resources Control Board has 14 given a waiver for storage of B-20 underground, and at the 15 end of three years they have to have achieved this third-16 party certification, like UL certification --

17

MR. HARRIS: Right.

18 MR. WARD: -- of storage tanks with biodiesel in 19 the -- in the various configurations. So I think that's 20 kind of the key for the residential infrastructure as I 21 understand it. And I'm hopeful that the three years has --22 has been well used so that these certifications can be 23 forthcoming for B-20.

I know the other gentleman mentioned that there are some manufacturers certified in B-20, and I'd certainly

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1 like to have you provide the -- that information to us in a 2 docket item if you could. That would be great because we 3 do -- I know B-5 is pretty ubiquitous, but B-20, some 4 manufacturers are really not there yet. Some are. But I really -- it would be helpful. 5 6 MR. GERSHEN: (Off mike.) (Inaudible.) 7 MR. WARD: Okay. If you -- I know our reporter 8 can't hear that, unfortunately. Sorry to ask you a question 9 and provoke a response that is off the record. 10 MR. GERSHEN: I'm sorry. Cummins, which is one of 11 the largest diesel engine manufacturers in the world, has 12 approved B-20 in pretty much all of their engine families, 13 so --14 MR. WARD: Uh-huh. 15 MR. GALLAHAR: -- that's one example. There are 16 many others. I can send you guys a link or a list if that 17 would be helpful. 18 MR. WARD: That would be terrific if you could. 19 Are there any medium- or light-duty manufacturers that you 20 are aware of --21 MR. GERSHEN: Yes. 22 MR. WARD: -- or uprising in B-20, as well? 23 MR. GERSHEN: Yeah, they're plenty. Yes. And 24 I'll send you that information. 25 MR. WARD: That will be most helpful.

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1 MR. SMITH: Real quick, sir, before you leave, 2 could you just state your name and affiliation for the 3 record? 4 MR. GERSHEN: Sure. Joe Gershen with Crimson 5 Renewable Energy. 6 MR. SMITH: Thank you. Thanks. 7 MR. WARD: Thanks again. 8 MR. HARRIS: Very good. Thank you so much. 9 MR. WARD: Thank you. 10 MR. HARRIS: Thank you. 11 MR. WARD: Thanks for coming today. 12 MR. SMITH: The next two speaking cards I have are 13 Gilbert Gallahar -- Gallahar, excuse me. And then Monty 14 Campbell. 15 MR. GALLAHAR: Staff --16 MR. SMITH: Good morning. 17 MR. GALLAHAR: -- good morning. Thank you for 18 coming. 19 Peter, it looks like you're going to live here in 20 the better part of town, huh? 21 This is concerning propane and --22 MR. SMITH: Sir, could you introduce yourself 23 quickly? 24 MR. GALLAHAR: Oh, my apologies. 25 MR. SMITH: It's okay.

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MR. GALLAHAR: Gilbert Gallahar, UTR Plus.
 MR. SMITH: Thank you.

3 MR. GALLAHAR: We manufacture or re-power diesel 4 trucks to operate on propane, heavy-duty. The commission 5 had given some funds to heavy-duty vehicles, and I think it 6 went something like 32,000 for natural gas and zero for 7 propane. And we're asking that -- can you sort of level the 8 playing field there?

9 We are fighting an uphill battle that I think that 10 propane will become a viable option in the heavy-duty truck 11 operations. And we need that portion to break that 12 dependence on -- on diesel. And I think that once -- once 13 the propane gets going it won't need any extra funds from --14 from the commission in that it would be able to fight the 15 marketplace just from its own economics. But right in the 16 beginning that was -- many clients just said, hey, look, you 17 know, if we go LNG or CNG we get 32, or we go with you and 18 even the commission doesn't think that you're viable. 19 So please, if you could look at that.

20 MR. WARD: I think we will be happy to look at 21 that. If you could provide us a docket item of what -- of 22 your business and this particular play for heavy-duty --

23 MR. GALLAHAR: Yes.

24 MR. WARD: -- I'd be delighted to see that, to be 25 honest with you. Because I think maybe others in the

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1 audience know that I'm a supporter -- I really like to 2 support all of the fuels, and propane is one that I've 3 supported for many years, as well --4 MR. GALLAHAR: Yes. MR. WARD: -- with the portfolio, so it is very 5 6 important. And given our energy situation with -- with 7 petroleum, and I think we're in an exporting situation with 8 propane --9 MR. GALLAHAR: That's correct. 10 MR. WARD: -- I think it has an excellent future. 11 And I'd love to see what the potential is for, you know, for 12 the vehicles, especially in the heavy-duty sector. We 13 certainly didn't exclude it on -- on purpose or intentful. 14 It wasn't anything intentful. I just personally didn't know 15 that there was a very large -- very large market segment for 16 heavy-duty propane currently. But if you could provide us 17 information in the docket that would be -- I'm -- I'm sure 18 we'd be happy to look at that. 19 MR. GALLAHAR: Thank you. It -- there is a 20 difficult in the sense of, well, show us, is anybody else 21 using it or is anybody else doing it, the large truck manufacturers, you know, using these -- these engines? And 22 23 the answer is, no. And the rationale is can there be a 24 reason? Maybe I doesn't work. 25 And you know, it's that battle that the smaller

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1 companies --

2

3

MR. WARD: Uh-huh. MR. GALLAHAR: -- you know, are trying to -- to overcome. And once -- once we get past that -- that little

4 5 hill I certainly believe that propane will be able to stand 6 on its own. And it's -- it's needed, that even -- even if 7 we don't get the funds what does not look good for us is propane heavy-duty not -- not compliant. And to the general 8 9 market, they view that as, you know, the commission saying 10 there is no such thing, it can't be done. Keep propane for the barbeques, etcetera. 11

12 But thank you very much. Thank you for that. 13 MR. WARD: Let me just say, I hope we don't imply that it's not compliant with any air quality or any --14

15 MR. GALLAHAR: Yes.

16 MR. WARD: -- any other regulations. I

17 certainly -- I certainly believe it is. But --

18 MR. GALLAHAR: Yes.

19 MR. WARD: -- I would like to see in your 20 information, you know, the market development potential for 21 that, and certainly will take it under our -- into 22 consideration. Because we understand that there is --23 propane is -- is a good energy solution. 24 MR. GALLAHAR: Yes.

25 MR. WARD: And we -- we do feel that it lowers

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greenhouse gases and lowers petroleum consumption about 100 percent. So I think it's, you know, it's definitely on the slate for us, but in this application we haven't seen a bunch of information about it. There may be some R and D or pre-commercial demonstration opportunity for this, as well.

6 MR. GALLAHAR: Thank you very much. The -- our --7 right now it's -- it's left to us, you know, smaller 8 companies to pick up that -- that show. And -- and again, 9 for small companies that's very expensive.

10 The issues that -- that we're finding is that once 11 the client uses the truck they want to keep it for 12 themselves as they've found a little pot of gold that puts 13 them ahead of their competitors, which for us is, you know, 14 killing.

15 MR. WARD: Uh-huh.

16 MR. GALLAHAR: But what sort of information can we 17 get to you?

18 MR. WARD: Well, I'm -- I'd would just like to 19 know more about your business and more about how specific 20 incentives that we may be able to provide would help, where 21 they would best be applied. And you know, from propane, 22 it's usually -- usually isn't in that infrastructure, but it 23 is, whether there's the development of the engine, whether 24 it's the differential cost on the -- on the certified engine 25 and vehicle, I'd certainly like to -- like to hear from you

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1 on that, what specific applications where this funding would 2 be helpful.

3 MR. GALLAHAR: Thank you. Just as an example, we 4 ran into the -- South Coast had a sizeable grant that it was 5 giving out. And we had many customers looking. And the 6 dealerships would come by and say, hey, propane is not -- is 7 not a viable heavy-duty fuel. 8 So -- and what maybe was an innocuous 9 presentation, hey, there's no -- no one bringing in a heavy-10 duty engine for these heavy-duty vehicles. Therefore, you 11 know, why give funding to it. But in the marketplace it was 12 taken as, hey, there is -- this is not a viable fuel. And 13 so all of our clients then went back to diesel --14 MR. WARD: Uh-huh. 15 MR. GALLAHAR: -- even though we had a higher cut 16 in pollution and in costs. 17 MR. WARD: I'm -- I'm absolutely foursquare behind 18 you in displacing diesel whenever we can, and -- and maybe 19 we can help. 20 MR. GALLAHAR: That would be great. 21 MR. WARD: If we can educate them, maybe we can 22 help educate others. I know that there's a potential for propane to be renewably derived, potentially in the future 23 24 as DME or --25

MR. GALLAHAR: Yeah.

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1 MR. WARD: -- or some other renewable type, 2 propane. And I certainly think that there are some heavy-3 duty truck manufacturers -- I think Volvo is one of them --4 that's interested in that application, as well. So --5 MR. GALLAHAR: Thank you. 6 MR. WARD: -- I think there could be -- could be 7 some good opportunity. I'd love to hear back from you. 8 MR. GALLAHAR: Will do. Thank you very much. 9 MR. WARD: Thank you. 10 MR. SMITH: Next up we have Monty Campbell, who I 11 believe provided a presentation. Good morning. 12 MR. CAMPBELL: Good morning. 13 MR. WARD: Good morning. 14 MR. CAMPBELL: Bring this down. Okay. 15 My name is Monty Campbell. I have a new company called Global Carbon Solutions. And I understand this 16 17 meeting is to discuss the allocation of resources among the 18 many categories from the \$100 million allotted from Assembly 19 Bill 118. 20 My first issue is that I've been trying for 21 several years to get funds. And I've been road blocked for different excuses or whatever, and it doesn't seem like it's 22 23 a fair system. The first time I was told that -- I asked 24 for the maximum amount, and that I had never had a grant 25 before.

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I said, "Well, reduce the maximum amount if you
 like, but I thought that was on the table."

3 And then it was like a Catch 22. You haven't 4 had -- haven't had a grant, you're not going to get a grant. 5 So the second time I applied I was told that the 6 funds were there, all I needed was a partner. I required --7 the proposal included a police department, a police fleet. Two days later I had a police fleet volunteer to test 8 9 vehicles. I got back to the -- to the individual in charge 10 and he said there were no funds. 11 So then I asked, "Where did the funds go?" 12 He gave me to his subordinate to please show me 13 what happened in two days. And then he refused to return my 14 emails. I get the feeling that it's not a fair system. 15 MR. WARD: If I could ask a question. For 16 which --MR. CAMPBELL: I'm sorry? 17 MR. WARD: If I could ask you a question, for 18 which question did you apply? 19 MR. CAMPBELL: I'm sorry? 20 MR. WARD: For which program did you apply? 21 MR. CAMPBELL: It was technology. The second time 22 it was for the advanced technology. I think there was \$8 million in the -- in the fund at that time. 23 24 MR. WARD: For this -- for this -- in this 25 program?

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1 MR. CAMPBELL: I'm sorry? 2 MR. WARD: In this program, the Alternative and 3 Renewable Fuel and Technology Program? 4 MR. CAMPBELL: It was, yeah, the technology 5 program. I believe it was --6 MR. SMITH: If I can clarify. I think I know the 7 answer. 8 MR. CAMPBELL: Innovative technologies. 9 MR. SMITH: Exactly. 10 MR. CAMPBELL: I don't expect you to address that 11 because I don't have the names with me. 12 But I would like to discuss the allocations among 13 the many categories. Okay. If I can proceed with the 14 slide. 15 MR. WARD: Just -- and I'm -- and let's -- we'll 16 go through your presentation. I just wanted to be clear 17 what program that you were saying wasn't being fair to you 18 and --19 MR. CAMPBELL: I can't understand you. 20 MR. WARD: -- I just wanted to be sure that I 21 understood which program you applied to and which program 22 you were saying --23 MR. CAMPBELL: The technologies. 24 MR. WARD: -- was not being fair to you, because I 25 wasn't aware of this in this program.

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1 MR. CAMPBELL: Yeah.

MR. WARD: That's -- I just wanted -MR. CAMPBELL: Innovative technologies. Okay.
So -- so now I'd like to present my little slide
show which would demonstrate my position on how the
allocation of resources from 118 do not appear to be
appropriate. Okay.
We see that this is pretty much common knowledge.

9 We've seen the price of fuel go up. We've seen inflation in 10 our currency. We are looking at some quite heavy-duty 11 carbon taxes coming up, Assembly Bill 32 for California, and 12 I believe there's at least 6 more federally. The -- the 13 presumption is to increase the price, you'll reduce the 14 demand.

15 It seems that there's some people in our 16 government that want to see the prices higher. This is U.S. 17 Energy Secretary Steven Chu. So there are some options, of 18 course. We can downsize, but you can't always use downsized 19 vehicles.

I'd like to say that electric cars are not a
viable option. If you look at the economics the cars are
extremely expensive. If you're -- in my situation, I'm
talking about police vehicles again, for police fleet
applications you'd have to have a \$79,000 charger for each
car.

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1 There is not enough electricity on the grid. 2 California has had brownouts for, what, decades, since 3 before the Enron debacle. You've seen the atomic energy 4 systems' generators go offline. If all the electricity was generated by uranium reactors we'd be out of uranium within 5 6 three years. This is -- it's not suitable. There's a whole 7 battery of emissions' requirements coming up that are going to attack the -- the coal-fired power plants, and so we're 8 9 going to see a lot of them go offline.

10 So my point is there never has been enough 11 electricity, even for our present use. Now if you try to replace the petroleum energy with electricity energy there 12 13 isn't any energy there to spare. We're actually going to be 14 losing power plants in the new future. We're not going to 15 be adding power plants. So the whole idea of adding 16 electric cars to replace petroleum doesn't make any sense. 17 Therefore I challenge the \$8 million in the category for 18 electric cars.

19 E-85 actually increases the use of petroleum. Ιt 20 takes 1,400 gallons of water to make a gallon of ethanol. 21 It takes more than a gallon of diesel to make a gallon of 22 ethanol. It takes natural gas to distill it multiple times 23 to become pure enough that it can be added to gasoline. Ιt 24 has to be hauled by a tanker, so it takes more energy than 25 it contains to haul it to California. It's driven the price

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of corn up 375 percent. It reduces mileage by 27 percent.
 It reduces horsepower. And when you burn it in an engine it
 produces aldehydes, which cause cancer.

4 Therefore I challenge your E-85 budget. It is not There's over 400,000 E-85 capable cars in 5 sustainable. 6 California. There -- at one time there were only 13 fuel 7 pumps. It costs \$140,000 to put an E-85 dispenser. Nobody wants it. It's merely a scam. The EPA offers 75 miles per 8 9 gallon to the OEMs if they can put a flex-fuel sticker on 10 the car and roll it off the showroom floor. They get a 75 11 mile per gallon credit for the CAFE average. It doesn't do 12 anything for us ordinary citizens.

13 Let's look at compressed natural gas. Now T-Boone Pickens has magically turned compressed natural gas into 14 15 something it's not. Again, in a police fleet -- this gives 16 you an idea of what's going on -- it costs \$34,000 per car 17 to convert to compressed natural gas. Part of that expense 18 is that they have three DOT approved compressed natural gas 19 high-pressure bottles that go in the trunk. Again, for 20 police fleet operation it takes a \$3 million quick-fill 21 dispenser. Maybe the garbage department has got a quick-22 fill dispenser, maybe not. Okay.

The gain -- the range on the vehicle is reduced 47 percent. So they're going to be refilling twice as often. The performance is reduced. You lose 17 percent of your

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1 There's 400 pounds added because of the tanks. You power. 2 have to modify the suspension. The engine reliability is 3 affected because the natural gas burns hotter. It has a 4 higher carbon rate or a higher hydrogen ratio, so it burns exhaust valves. It actually omits more nitrous oxides than 5 6 gasoline because it's got a higher combustion temperature. 7 And if you've got the gasoline emission system it's not up to what's required for natural gas. 8

9 And then in the case of the police fleet, if they 10 try to sell the car after it's through with service nobody 11 wants a natural gas car because there's no fueling available 12 for the average person. They're not convenient. And so it 13 costs \$34,000 to convert the car back to gasoline which 14 they're not going to do. So they're losing money on the 15 sale value of the cars.

Also, historically, around 1975 when I went to engineering school in Columbia, Missouri we had a natural gas shortage. And they went around turning off the dormitories because they didn't have enough natural gas.

The -- the whole idea that we've got abundant natural gas is a T-Boone Pickens' fantasy. The idea that they can fracture shale structures and produce light -produce natural gas is basically a fiction. When you fracture the structures it releases the hydrocarbons into the water table, and that's not going to be a very happy

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situation. Typically the wells are getting smaller. The
 big wells have been depleted. It costs about \$3 million per
 well to put in a well, and the wells are smaller and shorter
 lived.

5 We've seen prices increase 10 to 20 times within 6 one year historically. Therefore, I challenge the idea that 7 we should put \$8 million of public funds into natural gas to 8 help T-Boone Pickens.

9 MR. SMITH: Mr. Campbell, I know that you have a 10 lot of information here. But I think --

11 MR. CAMPBELL: I'm sorry?

12 MR. SMITH: I know you have a lot of information 13 and content in your slides, but we're starting to run a 14 little bit long on your presentation. I'd just encourage 15 you -- I think that you had --

MR. CAMPBELL: Are you saying to speed up, or what are you telling me?

18 MR. SMITH: Well, speed up.

19 MR. CAMPBELL: Okay.

20 MR. SMITH: And I think you had your own -- your 21 own technology to discuss, so I wanted to encourage you to 22 get to that more quickly, because I know you wanted this 23 opportunity to do so.

24 MR. CAMPBELL: Okay. Well, I also challenge your 25 hydrogen budget because hydrogen is made with electricity.

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If we don't have electricity for cars we don't have
 electricity for hydrogen.

If we look back at the real problem, the real problem is that half of the fuel is blown out of the tailpipe of internal combustion engine cars. That's why you have all the pollution devices, catalytic converters and all these devices that are supposed to treat it.

8 I don't know if I should discuss my technology 9 much, but my technology has been going on for 30 years. And 10 I've been privately funded because I have been unable to get 11 public funds. The public funds, as I mentioned, are going 12 into bottomless pits that have no promise whatsoever. I 13 found a way to take this pollution and turn it back into 14 fuel as you drive, so you don't need a \$3 million dispenser 15 or a \$140,000 dispenser. I use ordinary petroleum so you 16 don't need to make ethanol and take food away from starving 17 countries. A lot of countries by U.S. corn. And when the 18 price goes up they blame Mexican and Egyptian riots on the 19 price of corn.

20 So basically I would like to say that if you 21 allocated money into promising technology you would get a 22 reward. If you put the money from the public sector into 23 known bad alternatives you get known bad results, and this 24 has been going on for several years.

My technology has been approved for street use,

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1 for highway use, so it doesn't need a two-year

2 certification. That's another hang-up. It goes on and on.
3 It costs hundreds of thousands of dollars to -- to approve
4 anything new. And you're always two years behind because
5 you're not an OEM. The OEMs approve their cars two years
6 before they're sold. So this gives an advantage to have an
7 exemption so it can be used immediately. You don't have to
8 replace your fleet.

9 And we've demonstrated a drastic emissions 10 reduction. Under AQMD Rule 1191, police fleets are exempt 11 from the ultra-low emission fleet requirements. They're 12 basically low emissions. And as you can see, we've -- in an 13 old retired CHP car we've been able to drastically cut the 14 emissions from the old car. I dare say it qualifies for an 15 ultra-low emission vehicle as it sits.

So I'm -- this is to demonstrate the technology that we could have if the -- if the public money was given to new projects, to having them being given the time of day.

19 So if anybody would like to contact me I would20 love to talk to them. Thank you.

21 MR. WARD: Thank you for your presentation today,22 Monty.

23 MR. CAMPBELL: I'm sorry?

24 MR. WARD: Thank you for your presentation today.
25 MR. CAMPBELL: Thank you for the opportunity.

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1 MR. SMITH: Thank you. Oh, I hope I pronounce 2 this right. David Busher with Compro Systems. 3 MR. WARD: Dave -- David, I don't know how come 4 you're last here to speak. You were here, one of the first 5 people to be here, so I don't know how that works out. 6 Sorry. 7 MR. BUSHER: I parked closer. 8 MR. WARD: Thanks for hanging in. 9 MR. BUSHER: Again, appreciate the opportunity. 10 The one question I had was on hydrogen. Is that 11 solely for fuel cells or can that be for internal combustion 12 engines that run heavy-duty? 13 MR. SMITH: The allocation is for fueling infrastructure. I don't know a lot about the mechanics of 14 15 it. 16 MR. WARD: I think we -- we are pointing toward 17 the development of the fuel cell, the hydrogen fuel cells. 18 But if we put an infrastructure it doesn't preclude, and 19 we'd certainly like to have the volume from internal 20 combustion hydrogen vehicles used at the station, as well. 21 MR. BUSHER: Okay. MR. WARD: We're all about trying to improve 22 the -- the throughputs and volumes at the stations that 23 24 we'll be establishing. So I don't think if you had an 25 internal combustion hydrogen vehicle or set of them I think

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1 you could take -- it would certainly be allowed to fuel at 2 the stations we would establish with -- with public funds. 3 MR. BUSHER: All right. And as a comment, the --4 we have eight trucks running down at the port about two miles from here that are heavy-duty hauling containers that 5 6 are running on 100 percent propane, similar to Gil's UTRs. 7 So -- and then we're going for certification on replacements for the ISL and the ISX engines from Cummins. So we'll have 8 9 heavy-duty running on CNG, LPG, and hydrogen very soon. 10 MR. WARD: You -- you're part of our portfolio 11 right here. 12 MR. BUSHER: You got it. Thank you. 13 MR. WARD: Thanks very much. MR. SMITH: Did we have any additional comments? 14 We've -- we've run out of submitted blue cards. There are 15 16 more in the lobby. But -- yes? 17 MR. WARD: Good morning. 18 MR. PERKINS: Good morning. I'm Christopher 19 Perkins. I'm chairman of Unimodal Systems. We're a 20 developer of personal rapid transit technology. 21 I wanted to get an idea of what kind of schedule 22 the innovation category is on in terms of developing a plan 23 for how it intends to move forward. 24 I bring that up in the context of the 25 reauthorization of the federal transportation bill which is

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1 currently working its way through the process. And I think 2 that there's a real opportunity here as there's a federal 3 match component to the innovation category that could 4 potentially institutionalize the types of directions that 5 the CEC is looking to go with in innovation. And I think 6 there's an interest, for example, in developing personal 7 rapid transit demonstration at the federal level now, that 8 we could --perhaps if the right hand knew what the left was 9 doing here there's I think real opportunities here to make 10 some forward progress in this particular technology 11 category.

12 So really it's a question. What -- what do you 13 see the schedule as being and how do you see this playing 14 out?

MR. WARD: Well, I think that the solicitations, and here, I'll say it again, we have about five unfilled positions in the office that administers this program right now. We have no possibility of getting the exemption requests approved to fill those. So here's a couple of other things that -- I know it doesn't address your --21 directly address your question.

But Silk here, who I call him, very smooth that he is, he is the investment plan project manager. And as soon as this one is adopted we start the next day on one that will be due in six months from now.

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MR. BUSHER: Uh-huh.

2 MR. WARD: So that's July 1st, that's auspicious, 3 we'll start out next one, and that's due by probably 4 December 15th. So an even faster schedule for that. 5 Long story short, I'm just saying is that -- that 6 we're trying to put together solicitations as fast as we 7 possibly can. I think the -- the latest program opportunity notice for vehicle incentives is kind of the direction I 8 9 think we want to go, is to make it very simple, make it 10 straightforward for those items that do not require a lot of 11 evaluation. 12 MR. PERKINS: Uh-huh. 13 MR. WARD: Perhaps I could ask you, what do you think would be the best timing for this, considering as 14 15 you're watching the, you know, herding the ducks in 16 congress, etcetera? 17 MR. PERKINS: Well, what -- the message I got, 18 actually directly from Chairman Mica, is if you have a 19 program that you want to get into the bill we need to move 20 forward quickly because that -- they're looking to try to 21 get something together by summer for a vote in congress in 22 the fall. 23 MR. WARD: Uh-huh. 24 MR. PERKINS: That seems to be what their schedule 25 is working towards.

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1 Actually, there's I think three components to 2 With the innovation category that the CEC I think has this. 3 wisely incorporated into this 2011-2012 budget, there's an 4 opportunity here not only to go after a federal match, but 5 there's an opportunity, for example, in Fresno County which 6 passed Measure C in 2006, I believe, where they allocated 7 \$36 million for the development of personal rapid transit. They have now just completed their study period as to how 8 9 they intend to move forward with spending a variety of allocations that they've put into Measure C, and they've 10 11 concluded that they wish to move forward with a 12 demonstration project for personal rapid transit. So we 13 have a program there where they're ready to move forward, I think with some leadership. 14

15 We see an opportunity here I think with the CEC's 16 innovation category to have a California program here that 17 could potentially lead the nation and attract federal 18 funding on an ongoing and -- and, as I say, I think 19 institutional basis if we could get these priorities into 20 the transportation bill. And I might add that Chairman Mica 21 does agree with these priorities of the benefits of personal 22 rapid transit, that is it can be a zero emission 100 percent 23 solar powered public transportation system.

24 So I guess the -- the -- in a word, as soon as 25 possible, but recognizing the limitations and -- and the

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1 heroic effort that I know that your program has made to try 2 to stay on top of this rapidly changing field and being able 3 to respond to these changes as they develop, I mean, it's --4 it's much appreciated. So this is more -- not a hurry-up 5 message as just we remain patient and really look forwards 6 to working with you to make these opportunities happen. 7 MR. WARD: If you could provide us information about your -- what your vision is for --8 9 MR. BUSHER: Yes, sir. 10 MR. WARD: -- the demonstration --11 MR. BUSHER: Yes, sir. 12 MR. WARD: -- the amount of funding --13 MR. BUSHER: Sure. 14 MR. WARD: -- what potential partners you have. 15 And I you can --16 MR. BUSHER: Yes, sir. 17 MR. WARD: -- provide that to our docket --18 MR. BUSHER: Uh-huh. 19 MR. WARD: -- as soon as you possibly can, because 20 I could actually envision in this category we would do a 21 solicitation for what are the best innovative projects 22 and -- and hopefully streamline that process to make sure that we're not out of sync with any federal budget cycles or 23 24 any -- any approval in congress. So this might be done that 25 way, and I'd encourage you to -- to write a succinct letter

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1 to that -- in that regard with those details, potential 2 partners, potential opportunities with the federal 3 government. And of course, this is innovative, but go ahead 4 and describe the innovation, too, which would be helpful --5 MR. BUSHER: Sure. 6 MR. WARD: -- and what the ramifications are for 7 the State of California. 8 MR. BUSHER: Uh-huh. 9 MR. WARD: Terrific. 10 MR. SMITH: Quick little clarifying question. On 11 the federal scene is the -- is the transportation bill 12 looking to add language about this kind of project specific 13 to a certain location or as like a national competitive 14 solicitation type of process? 15 MR. BUSHER: Well, that -- that has yet to be 16 determined. 17 MR. SMITH: Oh. 18 MR. BUSHER: I mean, we're in the early stages. 19 As I said, I spoke with Chairman Mica. He introduced me to 20 his counsel to talk about the kind of language that needs to 21 go in it. Currently we have two representatives. 22 Our company, in fact, today is back at the FTA speaking with the head of the Office of Mobility, Walter 23 24 Kulyk, about how this could be incorporated. He has 25 indicated his interested in developing a PRT program. And I California Reporting, LLC 66

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1 think that the -- the opportunity for Fresno, for the 2 California Energy Commission, and for the state in general 3 here is that if we can bring these -- these together at this 4 critical moment there's a real opportunity that California 5 could be in a position to be in the national leadership role 6 in the development of this technology and finally get in the 7 race with Asia and the European Union which have developed this technology to the tune of about \$300 million of 8 9 investment.

10 So I think the urgency is finally being 11 recognized, and I see that my -- at the state level with the 12 CEC program, and also with Fresno County, has already been 13 identified. It's a question of -- of matching those 14 priorities in a way that makes sense for all the programs 15 involved.

MR. WARD: And that would be -- you're -- you're targeting some money in the FTA, is it?

MR. BUSHER: Yeah. Well, I think that given the -- yeah, that we would -- we would write language specific to developing a program that has the characteristics of what we would be stating would be here in Fresno, you know, a demonstration system that would be in Fresno County, for example.

24 MR. WARD: Uh-huh. But the -- the earmarking from 25 the federal government -- earmarking, wrong word.

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MR. BUSHER: Yes. But --

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2 MR. WARD: But targeting of funds that they may 3 have available in their budget would be through the FTA 4 budget particularly?

MR. BUSHER: It would be. We're looking to the 5 6 FTA. Now just to give you a little quick background on 7 this, we submitted a proposal under the TIGER program which was administered by FTA, and then the TIGER program which 8 9 was administered directly out of the Office of the Secretary 10 in DOT under Lahood. So we're actually talking to both --11 both sides of DOT on this, at the higher level and also 12 specifically to FTA about how this could be worked in, 13 how -- how it will ultimately be adjusted or put into the 14 bill remains to be seen.

But again, we are looking to make sure that everybody knows what's going on and that there's some sort of agreement potentially as to the efficacy and advantages of this program. So --

MR. WARD: If you can align the information for us and maybe we can consider being a strategic partner here.

MR. BUSHER: Very good. Thank you very much.
MR. WARD: Thank you.

24 MR. SMITH: Are there other speakers?

25 MR. WARD: Anybody online, Pilar?

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1 MR. SMITH: Oh, yes. Pilar, can you check if 2 there's anyone online? No, it doesn't look like it. Okay. 3 Any -- final call for comments, as it were. Okay. 4 So the next step, as I mentioned, we'll be hosting 5 a second remote public workshop very similar to this one in 6 San Francisco. That will be at the California Public 7 Utility Commission's auditorium June 1st starting at 9:00 a.m. again. 8

9 After that we will be combing through the comments 10 that we receive at this workshop, the San Francisco 11 workshop, new comments to our docket, and the second 12 advisory committee meeting that we had this past Monday, and 13 taking those comments, as appropriate, into the committee 14 final version of the investment plan, which should be posted 15 towards the middle of next month in anticipation of possible 16 adoption of the final committee version at a June 29th 17 commission business meeting. And then, as Peter says, we'll 18 get to work June 30th on the next investment plan.

19 So with no final comments, I'd like to thank 20 everyone who came out here today, and also thank everyone 21 who showed up on the WebEx. And finally, a huge thank you 22 to the people at the Long Beach City Hall who have offered 23 us this room on numerous occasions, and it is always a 24 pleasure to be here.

25

MR. WARD: And, you know, the Mayor here, Bob

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1	Foster, is a former Energy Commission employee and a friend.
2	And I really appreciate him opening this this venue for
3	up for us. We always enjoy coming here.
4	Thank you all again for coming today, and I look
5	forward to talking to you over the next period of months.
6	MR. SMITH: Okay. This meeting is adjourned.
7	(Workshop Adjourned at 10:42 a.m.)
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