BUSINESS MEETING

BEFORE THE

CALIFORNIA ENERGY COMMISSION

In the Matter of:)
)
Business Meeting)
_____)

CALIFORNIA ENERGY COMMISSION

HEARING ROOM A

1516 NINTH STREET

SACRAMENTO, CALIFORNIA

WEDNESDAY, OCTOBER 10, 2012

10:16 A.M.

Reported by:
Kent Odell

Commissioners Present

Karen Douglas
Andrew McAllister
Carla Peterman

Staff Present:

Rob Oglesby, Executive Director
Michael Levy, Chief Counsel
Jennifer Jennings, Public Advisor
Harriet Kallemeyn, Secretariat

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I N D E X

P R O C E E D I N G S

OCTOBER 10, 2012 10:16 a.m.

COMMISSIONER DOUGLAS: All right, good morning, welcome to the California Energy Commission Business Meeting of October 10, 2012.

Please join me for the Pledge of Allegiance.

(Whereupon, the Pledge of Allegiance was recited in unison.)

COMMISSIONER DOUGLAS: All right, so Item 2, just touching on some changes to the agenda, there's nothing on Item 2, so we won't be taking up Item 2.

Item 5 will be held until the next Business Meeting.

And we'll take up Item 7 probably a little later in the agenda, probably -- maybe not last, but towards the end of the agenda.

So, with that let's take up Item 1, the Consent Calendar.

COMMISSIONER PETERMAN: I move the Consent Calendar.

COMMISSIONER MC ALLISTER: I'll second.

COMMISSIONER DOUGLAS: All in favor?

(Ayes.)

COMMISSIONER DOUGLAS: Item 1 passes unanimously.

Item 3, Palomar Energy Center; possible approval

of the petition to amend the Energy Commission decision for the Palomar Energy Center to build a new bridge crane for turbine overhauls and general maintenance.

Dale.

MR. RUNDQUIST: Good morning Commissioners. My name is Dale Rundquist and I am the Compliance Project Manager for the Palomar Energy Center.

With me this morning is Kevin Bell, Senior Staff Counsel. Also present are representatives from the Palomar Energy Center.

Palomar Energy Center, a 500-megawatt combined cycle power project, owned by San Diego Gas & Electric Company, SDG&E, was certified by the Energy Commission on August 6th, 2003 and began operation on April 1st, 2006. It is located in the City of Escondido, in San Diego County, California.

On May 29th, 2012 SDG&E filed a petition with the California Energy Commission to amend the Energy Commission decision for the Palomar Energy Center.

SDG&E is proposing to build a new bridge crane for turbine overhauls and general maintenance of surrounding equipment.

A notice of determination was mailed to the Palomar Energy Center post-certification mailing list, docketed and posted on the Energy Commission website on

July 2nd, 2012.

On July 9th, 2012 Mr. Mark Rodriguez, an Escondido resident, sent an e-mail to staff stating, in part that, “The notice of determination to install a new bridge crane needs to be reconsidered and addressed only after additional mitigation measures are implemented because of the fire on December 22nd, 2010.”

This comment immediately elevated the staff-approved project modification to amendment status.

On August 7th, 2012 a staff analysis of the petition to amend was sent to the post-certification mailing list, docketed and posted on the Energy Commission website.

Staff reviewed the bridge crane petition for potential environmental effects and consistency with applicable LORS and considered the objections provided by Mr. Rodriguez.

Based on this review and the conclusions of the August 10th, 2011 report on December -- on the December 22nd, 2010 fire at Palomar Energy Center, staff determined that no significant adverse impacts pertained to any technical area are expected to be created by the proposed project modification.

A bridge crane is a minor modification of the heat recovery steam generator structure.

The August 10th, 2011 staff report on the December 22nd, 2010 fire at Palomar Energy Center recommended, in part, “That no additional mitigation be required for the Palomar facility or for new facilities to be permitted by the Energy Commission in the future.”

The August 10th, 2010 staff report further states, in part, “That the incident notwithstanding, the risk to public health and safety from such events is not likely to be significant because of their rarity, the low toxicity of the oil that might burn, and the engineering measures that are already required to be in place to prevent the fire from spreading.”

While further mitigations may be technically feasible, they are not needed and would offer uncertain benefit for the costs involved.

Staff attempted to contact Mr. Rodriguez on September 20th and September 27th, 2012 to discuss his objections and concerns about the construction of the bridge crane. Staff left messages on both occasions.

Mr. Rodriguez returned staff’s call on September 27th, 2012. Staff discussed Mr. Rodriguez’s concerns and objections and assured him that the December 2010 fire had been fully investigated and no further mitigation measures were required due to the fire, and that the bridge crane does not have a link to the earlier transformer fire,

emergency response, or incident investigation.

Staff sent the official Escondido Fire Department report to Mr. Rodriguez for his review. Mr. Rodriguez was very pleased to receive the complete report.

Energy Commission staff reviewed the petition and finds that it complies with the requirements of Title 20, section 1769(a) of the California Code of Regulations, and recommends approval of the project modification based on staff's findings.

Thank you.

COMMISSIONER DOUGLAS: Thank you, Dale. I see we have Adrianna Kripke, Senior Counsel for San Diego Gas & Electric here, if you'd like to comment now.

MS. KRIPKE: Good morning Commissioners, I want to thank you and staff for considering this proposal for a bridge crane at Palomar Energy Center. And I simply wanted to confirm SDG&E's view, consistent with staff's view, that this project will have no effect on the environment and also has no link to the fire that staff mentioned.

I'm also available to answer any questions you may have. Thank you.

COMMISSIONER DOUGLAS: Thank you. Now, is Mr. Rodriguez in the room or on the line? Did he want to comment on this item?

MR. RUNDQUIST: No, he -- we offered him that, I

sent him the agenda and instructions on how to participate, but he did not want to do that.

COMMISSIONER DOUGLAS: Okay. All right, thank you. So, I do have a question or a comment, it's not really based on the bridge crane because, you know, that is a minor amendment. I think staff's analysis was solid of that and, you know, I think the bridge crane amendment is fine, I can understand why that would be beneficial.

But I guess the question I have for you, Ms. Kripke, is that SDG&E's come in, in the past year, with I think five amendments, and so you've got a bridge crane. You were in here a few months ago to install an elevator. There's a gantry crane, there's a storage warehouse, there's a switch gear enclosure expansion. And these are all pretty minor amendments.

I just wanted to suggest that it would be helpful possibly to you, but certainly to us, if these amendments could be planned for and consolidated so that we're not taking five amendments through in a year.

Are there any other amendments that you have on the horizon that are of this nature?

MS. KRIPKE: My understanding, based on conversations with the technical staff at Palomar Energy Center is that we don't have any of these smaller amendments on the horizon.

There has been some investigation into efficiency improvements at Palomar Energy Center, and that's in the very early stages of consideration. We would notify staff and the Commission very early on about that.

And also, based on your comment, I think make sure that any other small items, just in terms of enhancing efficiency or just the day-to-day operations at the Center were combined with that.

We appreciate your comment and all of the consideration of these various amendments throughout this year.

COMMISSIONER DOUGLAS: That sounds great. I mean we would certainly welcome amendments that would help you improve efficiency. And at the same time the -- I think you -- you heard the gist of my comment, which is that where it's possible to consolidate these and bring them in together, we would appreciate that.

I think that would be better from everyone's perspective, including the perspective of the public because they see these things and they have to get their heads around what they are, and doing that fewer, rather than more times, is really helpful all around when it's feasible. I understand that it's not always feasible.

So, I don't have -- you know, I recommend this, Commissioners, for your approval, but I wanted to see if

you have questions or comments, first.

COMMISSIONER MC ALLISTER: I would just second the, you know, thoughtful engagement in just sort of workload considerations. Here and around in the community I know that there have been issues and we'll be fine with that plan.

Good news to hear about the potential efficiency improvements. I think we're all aware of the challenges coming up. You know, a project like that probably isn't happening by summer of 2013 but, you know, I think keeping a broad perspective of what improvements might bring value to the system is a good idea. So, I would encourage that discussion and ideation, if necessary. So, thanks.

Should I move it?

COMMISSIONER PETERMAN: No other comments.

COMMISSIONER MC ALLISTER: So, I'll move Item 3.

COMMISSIONER PETERMAN: I'll second.

COMMISSIONER DOUGLAS: All in favor?

(Ayes.)

COMMISSIONER DOUGLAS: Item 3 passes unanimously, thank you.

Item 4, Energy Provisions of the California Green Building Standards Code; possible adoption following publication of proposed changes in 15-day language comment period of the proposed 2013 updates to the energy

provisions of the California Green Building Standards Code and the California Code of Regulations Title 24, part 11.

Patrick.

MR. SAXTON: Good morning Commissioners, they're just get the presentation on the screen for us.

I'm Patrick Saxton from the High Performance Building and Standards Development Office. I'm here today requesting adoption of the proposed 2013 energy provisions of the California Green Building Standards Code and the California Code of Regulations Title 24, part 11, also known as CALGreen.

The next slide, please. The policy drivers for the energy provisions of CALGreen are the same as those for the Energy Commission's Building Energy Efficiency Standards in Title 24, part 6.

Examples of these policy goals are those for newly constructed residential buildings to achieve zero net energy by 2020, and newly constructed commercial buildings to achieve zero net energy by 2030.

They also continue the long-standing policy that energy efficiency be placed first in the loading order when determining the resource requirements for the State. And there's the overarching goal of reducing greenhouse gas emissions.

The remaining items are relevant policy documents

which embrace these policy goals.

The next slide, please. The 2005 Governor's Executive Order which called for greenhouse gas reduction targets and was the predecessor to the AB 32 California Global Warming Solutions Act was an impetus for the initial CALGreen in 2008.

These graph indicate the prominent role that buildings play in GHG emissions, approximately 24 percent for California's current emissions and also the goal for the reductions to be achieved by buildings through energy efficiency.

Approximately 70 percent of the electricity and natural gas sector's reduction share.

The next slide, please. The public process for the energy provisions of CALGreen began with staff workshops in the fall of 2011. There were significant stakeholder engagement and their comments and feedback have informed the efficiency measures which were ultimately included in the proposed language.

The bullets on this slide indicate why it's important to have energy provisions in CALGreen and why, for the first time, the Energy Commission will be adopting those energy provisions rather than informing the overall CALGreen development process.

The provisions will become the energy chapter of

the California Green Building Standards. For the most part that language will be included in the voluntary appendices. The provisions will become the new construction program targets for utility incentive programs, which is increasingly important as the synergy between building codes and the utility incentive programs continues to grow.

The energy provisions will become the basis of green building codes, which may be adopted by local jurisdictions. These could include the CALGreen Tiers I and II, Green Point rated, LEAD or jurisdiction-specific codes.

And currently for the 2010 CALGreen, or I should say the combination of the 2008 Building and Energy Efficiency Standards and 2010 CALGreen, there have been over 40 local ordinances which have been approved by the Commission, with the most recent being on this morning's consent calendar.

And, finally, the measures that are present in the energy provisions of CALGreen are queued for possible migration to the Building and Energy Efficiency Standards in Title 24, part 6 in the future.

The next slide, please. We'll now discuss the specific measure recommendations for various building types. In the voluntary appendix, A.4, will be the language for newly constructed residential buildings.

We have recommended prerequisites, which are measures that we believe should be included in all Tier I or Tier II residential building projects.

There's a whole building energy design rating which provides a metric for whole building energy consumption, which I'll discuss more on the next slide.

Quality insulation installation ensures that the performance level of the installed insulation will meet specifications.

High efficiency indoor and outdoor lighting can provide significant energy savings due to reducing the wattage of the installed lighting load.

For the performance standard target the Tier I and II has a recommendation of 15 percent or 30 percent reduction in the energy budget that would otherwise be allowed by part 6.

The next slide, please. The whole building energy design rating is a metric which will encompass a greater percentage of the energy present in the residential building.

Currently, Title 24, part 6 covers approximately 45 percent of the energy use, which would be space cooling, space heating, water heating, and for residential building, lighting controls.

This whole building energy design metric will

also include appliances, plug loads, and the actual lighting power densities for indoor and outdoor lighting.

The rating will be calculated by compliance software based on default values from the HERS Technical Manual, and does not require additional input from the users of the software.

The recommendation would be to generate and report the rating, not to achieve any specific rating.

We've had several questions if electric vehicles would be involved or provisions for future electric vehicles would be part of this rating system. And they would not be.

The next slide, please. Also in the voluntary appendix A.4 are the recommendations for additions and alterations to existing residential buildings.

The only prerequisite would be a recommendation for high-efficacy indoor and outdoor lighting for any newly installed lighting.

The energy budget reductions for the performance standard targets range from 5 to 15 percent and are based on the tier level and the number of mechanical systems involved in the project.

If the addition or alteration changes only the envelope, without any changes to a mechanical system, just the prerequisites would be recommended.

The next slide, please. Voluntary appendix A.5 has the recommended proposals for all nonresidential buildings. This would include newly constructed and also additions and alterations to existing nonresidential buildings; a 10 percent reduction in outdoor lighting power, which can provide energy savings due to the reduced wattage of the installed lighting load; a recommendation that high-rise multi-family dwelling units and hotel/motel guest rooms comply with the residential indoor lighting in the voluntary appendix A.4.

And this preserves the same relationship for these space types as currently exists in Title 24, part 6.

And a final prerequisite for large restaurants, which are defined as 8,000 square feet or larger, that would include either a solar domestic hot water heating system, with a 15 percent solar fraction or a 95 percent thermally efficient water heater.

Energy budget reductions for the performance standard targets would range from 5 to 15 percent depending on the tier level and the number of energy systems involved in the project, either indoor lighting or mechanical systems, or both.

And again, if the project is for the building envelope, only, only the prerequisites would be recommended.

The next slide, please. If the 2013 energy provisions of CALGreen are approved today, then the post-adoption rulemaking activities will be merged with those for Title 24, parts 1 and 6, which were previously adopted by the Energy Commission in May of this year.

The combined rulemaking package would be submitted to the California Building Standards Commission for approval at is December meeting.

And, finally, all provisions of part 11, which had been approved by the Building Standards Commission would be merged such that the energy provisions are encapsulated with the other part 11 provisions for publication.

There's one last note that there's also a proposed adoption order for the 2013 energy provisions of CALGreen that's before the Commission today.

Adoption of the 2013 energy provisions of CALGreen would also include an adoption of that proposed order.

Thank you and I'm happy to address any questions or comments.

COMMISSIONER DOUGLAS: Thank you, Patrick. Questions or comments, Commissioners?

COMMISSIONER MC ALLISTER: Okay. I'm looking forward to hearing what some of the folks in the audience

have to say because I think there are a few people, at least, who want to comment on this.

I think this is kind of landmark stuff. Thanks, Patrick, for all your hard work on this and the rest of the staff.

You know, we have -- for new construction in residential we have -- we have to get to zero net energy by 2020 and we don't have that long. We have a couple of Title 24 Code cycles and I think a lot of discussions about how we're going to do that, and what the pathways are -- and this is a huge step in that direction.

And just by encompassing appliances and other plug loads that, in and of itself, is a big step and, you know, very important, and the experience we're going to learn with the local jurisdictions and other utilizers and adopters of CALGreen I think is going to be instrumental in figuring out what the best, you know, most efficient pathway forward to reach the zero net energy goal is going to be.

So, a lot of work's gone into it up to now, there's a lot more work to come in the implementation, but I think it's in the direction we have to go in and it complements the part 6 very well.

And, you know, I think in that respect it's the right thing at the right time, even a little behind

schedule because we really have a lot of time pressure here to get things done.

So, you know, appreciate the -- well, really appreciate the leadership from various agencies, including the Governor's Office on this and also, you know, definitely staff's done some heavy lifting for them, and Pat's been very engaged in that.

So, that's all I'll kind of say, high-level for now, and welcome comments from others.

BOARD MEMBER FIGUEROA: Great. So, I've got a card from Bob Raymer, with the Building Industry Association.

MR. RAYMER: Thank you, Commissioners. I'm Bob Raymer with the California Building Industry Association and I'm here today to support adoption.

And I've also been requested by Matthew Hargrove, of the California Business Properties Association to support adoption of the nonresidential provisions. So, both residential and commercial sectors, we'd support adoption.

And with that, kind of looking towards the future, as Commissioner McAllister just made reference to, with our goals of zero net energy, particularly in the residential sector, as you saw from Patrick's probably fourth or fifth slide, about 55 percent of the energy load

in the house is related to plug load.

And so over the next three- and six-year cycle CBIA, and I'm sure a host of others, would love to work with the Commission and the Department of Housing in trying to more aggressively go after the plug load. We've done what we can to support the CEC efforts in Washington D.C. And to that extent that -- doing that and aggressively going after that within, particularly, the next three years will help reduce not only the physical size of the PV system on the roof but, of course, the cost.

And so there's a nice synergistic effect of that.

One last item, as we do go forward to the next 18-month and three-year cycle on CALGreen and the energy regs., we hope that we could get the other sort of sister agencies, namely the Department of Housing and Community Development, and the Office of the State Fire Marshall in on the work that the CEC's doing at the front end.

We've got lot to do at electric vehicle charging stations for residential sector, both single-family and multi-family. We fully anticipate that there will be mandates by the time we hit the 2017 code and we want to make sure that we're not sort of learning by trial and error how to hook that up.

And that means we're going to have to have both the manufacturers and the utilities working with this

process, something that's a little bit new to the normal building code process in the State.

There's also, of course, a host of other efforts that will be needed to link in with the Electrical Code, the Fire Code, the Building Code, plumbing and mechanical.

And so all of these we can't fix the problems at the end of the cycle, we need to kind of get the agencies working together at the front end.

So with that, once again, we support adoption today. Thank you.

COMMISSIONER DOUGLAS: Well, thank you, Bob, for being here. It's been a real pleasure to work with you through the whole cycle.

MR. RAYMER: Right.

COMMISSIONER DOUGLAS: Are there any other comments on this item? I don't have any other cards.

Mike?

MR. LEVY: Yeah, just a really technical change. Actually, the document should be dubbed a resolution, not an order, so if you could --

COMMISSIONER DOUGLAS: Ah, resolution, okay. Thank you.

All right, well, Commissioner McAllister you made a couple comments just teeing this item up, and I want to really second the comments that you made.

You know, this is a really important step forward towards the State's zero net energy goals and towards building in and solidifying some of the interagency coordination that Bob Raymer was just talking about in terms of the REACH standards and how measures that we work on here, from an energy savings perspective, can also be coordinated with the State Fire Marshall and with others. We do that now, but there's a lot of implementation going forward that will, I think, put us in a position to really build those relationships. And CALGreen is certainly a real opportunity to do that at the front end.

So, I'm really pleased to see this item come forward. I want to thank staff, you know, for your hard work and also there's been a lot of stakeholder engagement on this item and that's been very helpful, too.

I don't think I have any additional comments. Andrew, do you? No, okay.

COMMISSIONER PETERMAN: I'll just echo that I'm also supportive of this initiative and thank Commissioner McAllister for his leadership on this area, as well as Commissioner Douglas with her leadership with the energy efficiency up until this point.

Any time we can encourage exemplary performance by buildings we should. And I think this document -- or resolution's a step in the right direction.

COMMISSIONER DOUGLAS: Great, thank you. So, do we have a motion on this item?

COMMISSIONER MC ALLISTER: Sure, I will move Item 4.

COMMISSIONER PETERMAN: I'll second.

COMMISSIONER DOUGLAS: All in favor?

(Ayes.)

COMMISSIONER DOUGLAS: The item passes unanimously. Thank you very much.

MR. SAXTON: Thank you, Commissioners.

COMMISSIONER MC ALLISTER: Thanks Pat.

COMMISSIONER DOUGLAS: So, we are going to move into some AB 118 items, now, and I we are going to take them in order. So, hopefully, nobody left the room to go get coffee.

We'll go Item 6, now, Alternative and Renewable Fuel and Vehicle Technology Program Investment Plan; possible approval of modifications to funding allocations for the 2011 and 2012 Investment Plan, and the 2012 to 2013 Investment Plan Update for the program.

Charles.

MR. SMITH: Thank you. Good morning Commissioners. My name is Charles Smith and I'm with the Fuels and Transportation Division's Emerging Fuels and Technologies Office.

Today staff is requesting approval of funding adjustments to the 2011-2012 Investment Plan and 2012-2013 Investment Plan Update for the Alternative and Renewable Fuel and Vehicle Technology Program, also known as the ARFVTP.

These funding modifications are necessary to allow the ARFVTP to utilize program funds more effectively and within the program's established fiscal deadlines.

If approved, these changes will allow staff to prepare solicitations and funding awards based on revised investment plan allocations.

First, I'd like to present the changes for the fiscal year 2011-2012 Investment Plan.

This 2011-2012 Investment Plan allocated $500,000 for the deployment of propane fueling infrastructure.

In the most recent solicitation for alternative fuel infrastructure, the Energy Commission received no applications for this category.

Staff is therefore requesting these funds be redirected to the charging infrastructure investment plan category. Unfunded projects in this category exist that can utilize the additional funding.

The 2011-2012 Investment Plan also allocated $500,000 to support sustainability studies. However, no priority tasks have been identified in this field that

could utilize these funds.

Staff is therefore requesting that these funds be redirected to the category titled, “Develop and Demonstrate Advanced Technology Medium and Heavy Duty Vehicles.”

Here again, unfunded projects in this category exist that could utilize the additional funding.

The 2012-2013 Investment Plan Update allocated a combined $100 million for all categories. However, the Budget Act of 2012 reduced the Energy Commission’s ARFVTP appropriation by $10 million.

Therefore, the total funding allocation within the 2012-2013 Investment Plan Update will need to be reduced by a corresponding amount.

Staff requests approval to evenly reduce all funding categories by 10 percent.

I’d like to note that these reductions will not affect any pending awards or active agreements.

All of these changes are highlighted in the tables included in your background materials.

With that, I thank you for your consideration of this item and am available for any questions you may have.

COMMISSIONER DOUGLAS: Thank you, Charles. Let’s see, questions or comments? I don’t think I have any public comment on Item 6.

COMMISSIONER PETERMAN: I’ll offer a couple of

comments. Staff's proposals are to ensure that the funds collected for the 118 program are spent and are spent on projects that will meet the goals of the program and our State goals in terms of having cleaner transportation.

They're also meant to make sure that these funds are spent in a fiscally responsible manner. As decisions occur and sometimes funding is reduced, we wanted to make sure that we are being fair to all the parties who are applying for money, and I support the even 10 percent cut across the board in the funding categories.

I'd like to note that we had a very successfully AB 118 Advisory Committee meeting that was open to the public, a few weeks ago, to talk about the current status of technologies and fuels and alternative vehicles.

We brought up these issues and these proposed changes to the '11-'12 budget and got good feedback from the Advisory Committee on that.

And we continue to work to communicate as openly and often as possible with our stakeholders regarding program changes, and I'm supportive of the ones proposed today.

COMMISSIONER DOUGLAS: Thank you, Commissioner Peterman. I agree, I think it's essentially, obviously, that we move to put this money to work on good projects as soon as possible. So, I'm really supportive of it.

I will note that in terms of the under-subscription of the sustainability category I think it would be great as, you know, you work with the investment plan to really identify some of the forward-looking sustainability issues that would be good for us to get a start on so that -- you know, so that we've done some ground work in some key areas and are prepared when issues might or can come up.

But at the same time, you know, I think that the first priority is definitely putting the money to work, so I'm strongly supportive of the reallocation.

COMMISSIONER PETERMAN: That's a great suggestion, Commissioner Douglas, and I encourage staff to do the same as well.

COMMISSIONER MC ALLISTER: So, I agree with the comments of the other Commissioners.

And I want to ask a question about sort of, you know, do you see any particular reasons for the under-subscription on the propane side and sort of what do things look like going forward for any future solicitations for that?

MR. SMITH: As for the under-subscription rate, it's a little difficult to know for sure. It's possible that either there was, you know, insufficient demand for the funding as offered, or the possibility that the right

people just didn't hear about it.

But in general, I would note that we haven't seen a lot of interest in propane fueling infrastructure in general.

COMMISSIONER MC ALLISTER: I do know --

COMMISSIONER PETERMAN: I'd say at the last -- Commissioner McAllister, I'll just add that at the last Advisory Committee meeting we had, we had some representation from the propane community and one of the issues raised was how do we get the word out more, and how does their association get the word out about the availability of funding?

This is an area we have provided funds for in the past.

COMMISSIONER MC ALLISTER: Okay, yeah, great, I guess that would be my suggestion as well, so I'm glad -- I'm behind the curve there on that. So thanks, thanks for managing.

You know, we have to get the money to work so I think, really, it's sort of a lesson in, hey, we've got to -- everybody who could be availing themselves of these programs needs to pay attention and needs to be on the right lists, and getting the notices, and pulling their teams together in advance to put together proposals that are fundable.

So, I think this is a great opportunity for the State and for our industries and so, you know, hopefully, they can take that back and the next RFP that comes around for their sector they can get some good proposals in. So, thanks, I'm supportive.

COMMISSIONER PETERMAN: I'd like to move, then, Item Number 5.

COMMISSIONER MC ALLISTER: I'll second.

COMMISSIONER PETERMAN: Oh --

COMMISSIONER MC ALLISTER: Oh, oops. Oh, right, it's 6, right.

COMMISSIONER PETERMAN: It's 6, sorry, I'd like to move Item Number 6.

COMMISSIONER MC ALLISTER: I'll second.

COMMISSIONER DOUGLAS: All in favor?

(Ayes.)

COMMISSIONER DOUGLAS: Item passes unanimously. Thank you very much.

And now we'll go to Item 7, Tesla Motors, Incorporated; possible approval of Agreement ARV-12-008 for a grant of $10 million to Tesla Motors, Incorporated for the expansion of Tesla's manufacturing capacity in Fremont, California, and introduction of new equipment specifically designed for the manufacture of components of the Model X, and for final assembly of a finished vehicle.

Charles.

MR. SMITH: Good morning again, Commissioners.

My name is Charles Smith, I'm with the Emerging Fuels and Technologies Office.

Today staff is seeking approval of ARV-12-008, a grant for $10 million in Alternative and Renewable Fuel and Vehicle Technology Program funds to Tesla Motors, Incorporated.

Tesla responded to PON-11-604, a solicitation to support advanced vehicle technology manufacturing in California. And they will be providing $50,200,000 in match funding for this project.

The goals of this project are to accelerate the adoption of electric vehicles through the introduction of a new model that meets the needs of consumers, to expand jobs in California, and to support the long-term reduction of the price of electric vehicles for all Californians.

The primary activities in this project include the expansion of Tesla's manufacturing capacity in Fremont, the introduction of new equipment specifically designed for the manufacture of components for the Model X, and the final assembly of the finished vehicle.

As the world's first pure electric, all-wheel drive crossover vehicle, the Model X will provide Californians with a clean alternative to an internal

combustion SUV.

This vehicle will have a driving range of more than 240 miles on a single charge, with zero tailpipe emissions.

It is anticipated that the Model X could be produced in quantities of 10,000 to 15,000 vehicles per year starting in late 2014.

As of mid-March 2012, Tesla employed roughly 1,500 full time and contract workers in California. Almost 600 of which are engaged in manufacturing.

The production of the Model X will directly support over 500 additional jobs at Tesla facilities in California.

In closing, staff asks the Commission to support approval of Agenda Item Number 7 for a grant agreement with Tesla Motors, Inc. in the amount of $10 million.

I'm available to answer any questions you may have. Additionally, I believe representatives from Tesla are also here to provide comment and answer any questions you may have for them.

COMMISSIONER DOUGLAS: Thank you, Charles, that's great. Are there representatives of Tesla here today? If you could come forward?

MR. WITT: We should introduce ourselves, I guess. My name is Daniel Witt, I'm a Legislative and

Policy Associate for Tesla Motors.

MR. TAYLOR: And I'm Mike Taylor, Vice-President of Finance for Tesla Motors. Thank you for having us.

COMMISSIONER DOUGLAS: Well, thank you for being here. You know, we invite you to make a comment, if you'd like to, at this point. The Commissioners may have questions as well.

MR. TAYLOR: Sure. So, one, I'd like to thank everybody for inviting us here, and the staff for their very diligent work on considering our proposal.

I do think it is helpful that, you know, too often we're portrayed in the press as only producing an electric sports care and I think that kind of misses the point of what, really, Tesla Motors is trying to do, and why I think it's important for California.

So, our mission has always been, since the start of the company, it started in 2003, to aggressively promote increasingly affordable electric vehicles for the masses.

We started out with an electric sports care because we needed, because of the technology was rather high and we needed to get a car at a higher price point to generate the margin and to generate the enthusiasm for us, as a company, that enabled us to attract additional capital into the company.

We were successful at doing that. The Roadster

now has -- we've produced about 2,500 of them. They're on the road right now in 35 countries in the world. And we've put about 30 million miles, all electrically driven miles, to the credit of the Tesla Roadster.

On the back of that success we have embarked on our next vehicle, which is the Model S Sedan, which is a five-person sedan that has a range of up to 300 miles.

We're actually -- Daniel and I were lucky to actually drive here all the way from Palo Alto, and used about half the capacity of the vehicle in getting here to Sacramento.

We have just started production of that vehicle. Starting in 2010, where we were lucky enough to have the opportunity to revitalize the former NUMMI facility in Fremont, California. So, we took over that facility and since that point we've been developing the Model S. And in the course of it we now employ -- because of the partnership with California on a number of fronts, we now employ over 3,000 people at Tesla Motors, almost, I'd say, 1,600 of those are in manufacturing at our Fremont facility. So, it's been a quite success story so far.

We have entered production of the Model S. And while we have slowed the production ramp for mainly quality reasons, we have over 13,000 people throughout the world that have put $5,000 or more down for that vehicle, that

we're rapidly trying to satisfy through our increased production.

We will get to our goals of 20,000 a year in 2013, right, and employ another few hundred workers in that endeavor.

So, that leads us here to Model X and sort of why Daniel and I are here to advocate support for the grant.

During the course of the Model S we faced daily decisions, in fact, we're a publicly traded company, we have to evaluate each and every one of these capital decisions about what types of things we're going to in-source at our Fremont facility and what types of things we're going to keep at our suppliers.

One of the reasons why we liked this grant was because it is for the manufacturing capital, which myself and my staff look at on a very detailed basis to try and figure out is the cost benefit such that it makes sense to relocate that capital and those production activities, and those jobs into Fremont.

The grant allows -- it changes the balance of those particular decisions and allows us to in-source a bunch more jobs into California. That would be with the projected volumes of Model S, in 10,000 to 15,000 vehicles per year. We think we can add an additional 700 to perhaps more jobs into California for that particular project.

So, with that I'm hopeful we did a good articulation of the goals. I'm hopeful that the Commission sees it in their power to approve the grant request.

COMMISSIONER DOUGLAS: Well, thank you, that was a very helpful summary. If you could stay there, that would be great. And let me go to a comment from Air Resources Board, Ryan McCarthy, and then we'll go to Commissioner questions and comments.

MR. MC CARTHY: Hello, Ryan McCarthy with the California Air Resources Board, it's my pleasure to be here to testify on this topic and I appreciate the time.

The California Air Resources Board is very supportive, obviously, of zero emission vehicles. We know that commercialization of zero emission vehicles is imperative for meeting our air quality and climate change targets, and we are very supportive of Tesla's efforts to commercialize zero emission vehicles, specifically battery electric vehicles in the proposal in front of you today.

Tesla has the distinction, a unique distinction of being the only automaker to ever ask us to actually increase our targets under the zero emission vehicle rule, which they have done twice.

And I think we are in agreement that they are clearly an innovator and a pioneer in the electric vehicle space. They have delivered a form and function of electric

vehicles that I think most people never thought imaginable and probably still don't believe imaginable, even though these vehicles are on the road today. And I think the Model X is going to be the next embodiment of delivering on that unique vision and capability.

I think your support, today, of their innovative efforts will continue to help them develop this technology further, bring down the costs and really make the promise of their early model vehicles more available to the masses. Perhaps in their gen 3 vehicle, that could really be, ultimately, a game changer for the electric vehicle market, and for air quality, public health, and energy use in California.

I just want to -- we've heard, already, about the manufacturing and I think that's worth re-emphasizing, the fact that Tesla and a few other California companies have brought auto manufacturing back to California in the form of electric vehicles, I think that's profound.

I think the fact that they have located, in the high-tech hub of the world, a manufacturing facility that has re-employed former NUMMI workers, as well as hundreds of others is worth our continued support.

I have had the opportunity to visit that facility, both when it was a NUMMI plant, and to see early production of the Model S. I was impressed with both

efforts and I looked forward to visiting again in the future. And I hope the Tesla operation is at the scale that I saw for the Toyota and GM operation.

So with that I urge your support, hope that you will help to bring that vision to fruition. And I appreciate your time.

COMMISSIONER DOUGLAS: Thank you, Ryan, thanks for being here.

Questions or comments, Commissioners?

COMMISSIONER PETERMAN: Commissioners, I'll have some comments, but first let me turn to you to see if you have any questions for Tesla?

COMMISSIONER MC ALLISTER: Yeah. Great, yeah, I do. Just a little anecdote here, I was at the Portable Power Conference maybe 10 or 11 years ago, I believe in San Francisco, and I had been doing a lot of research on portable electronics, and I had lunch at the conference with this young, you know, newly minted engineer from Stanford, whose name I don't remember, who was working for a company he couldn't tell me about, that was -- he was really excited about, very vehement, full of zeal, and he was talking about this electric sports car he was working on. He was a -- I believe he was a mechanical engineer. And so I drove him about it and he said, yeah, we're going for the upscale sports car market, you know, wealthy folks

that can afford these cars. And I at that point was living in Berkeley, did not have a car and was, presumably, eating a lot of organic food. Anyway, I'm being self-deprecating. All those things are wonderful, right, sincerely.

But I just kind of couldn't quite get my head around it at that point. So, clearly, that company must have been Tesla. And I think the business model that he expressed, which was to go for the IP, was to develop something that has some margins, able to develop the technology sustainably and with some profit margin, I think clearly the company has been pursuing with a high degree of focus since then.

And I think has produced results in the marketplace, creating new technology and IP, and being able to bring that in a measured way to the marketplace, in a way that fits California's policy goals.

So, I see the bigger picture now, more than I might have at that point. And I think for that reason I'm supportive of this grant.

So, I do have a couple of questions, though. One of the -- I have a long relationship with batteries, both from developing countries, lead acid batteries in remote places, all the way through to what I was talking about before.

Now, the Roadster and the other models you're

producing, you know, give new meaning to the phrase "portable electronics."

And I wanted to hear a little bit more, without breaching any touchy issues, about the battery lifecycle. And also, 200 plus miles is a long way and a lot of energy and I'm just wondering sort of what your projects of the battery lifetimes and things like that might be, and sort of how you're building that component of the supply chain and the maintenance chain for all of your models going forward.

So, I'd be interested in sort of hearing some high level insight about that.

MR. TAYLOR: So, in terms of the battery life, so those of you that don't know, the battery is the most significant cost of the electric vehicle. It's something that Tesla -- we literally scour the world to find the best batteries for our cars. We have over, probably, today, 2,000 different cells on test in our lab and we're continually evaluating them not just calendar life, and not just lifecycle but, you know, performance in our vehicles, and how well they do in cold temperatures, how well they do in warm temperatures, so on and so forth.

So, it's something that we take very seriously. There have been improvements in both -- critical to Tesla is energy density, which is the amount of energy you can

pack either into a particular volume of space or for a particular weight, right. Both of those we take very seriously.

But our customers and ourselves also take very seriously about how long these batteries are going to last in their cards.

So, for the Tesla Roadster we have said that the batteries will retain -- so batteries degrade over time, so batteries retain after seven to ten years of their life. It depends on how you drive the car, how aggressively you drive. But after seven or ten years they still will have 60 to 65 percent of their ability to hold a charge still present in the battery.

That equates to over 100,000 miles for the Tesla Roadster.

For the Model S things have improved. We have not made public comments as to sort of how much they've improved because we are currently looking at -- we have a battery replacement option for the Roadster that allows people to purchase a battery up front, purchase the option to buy a battery up front.

We're going to introduce the same for the Model S, right. The calculations about battery lifecycle go into that.

But suffice it to say that energy density has

improved about eight to ten percent a year, which enables us to pack more density into a pack, so you can go a particular mile for cheaper if you need to, right.

And lifecycle has improved pretty significantly. So, I think the public is going to be very impressed about what we're able to do for Model S.

COMMISSIONER MC ALLISTER: Thanks. No, I think I'm good for now. I'd welcome Carla, who has been more involved in this, or Karen first.

COMMISSIONER DOUGLAS: You know, I just had a brief comment which is that I've been strongly supportive of moving in to finding ways to help support or incentivize manufacturing in technology whether it's, you know, solar panels, or electric vehicles, or other related clean energy technologies in California.

So, I'm really pleased to see you here today. I think that it was helpful for me to hear you talk about the kind of calculation that goes into whether you expand the capacity in Fremont or outsource a certain component or a certain aspect of the manufacturing.

We certainly -- you know, over the past couple of years created the Clean Energy Business Financing Program, which has typically been financing -- been providing low-interest loans for photovoltaic production, although it was open to other types of technology when we did that

solicitation.

The AB 118 program has moved into manufacturing and that's been continued as a component, among many, in the investment plan.

So, I'm happy to see you there. You know, one of these days maybe I'd love to see the facility, myself, as Ryan as. Although, you know, sometimes it's hard to get out of the office.

But in any case, I certainly wish you success.

And let's go on to Commissioner Peterman.

COMMISSIONER PETERMAN: Thank you, and thank you for highlighting the various ways in which the Commission has tried to support both those dual goals of a cleaner environment, as well as business.

I'm supportive of this project and this grant. I think it is a true investment in cleaner air, reduction in greenhouse gases, as well as the California economy.

And I particularly applaud you for your continued efforts to diversify the vehicle fleet. I think we want to envision a world in which we're able to drive the variety of cars that we do now, but just on cleaner fuels. And so the introduction of the sedan and now the SUV model I think will allow for further penetration of this technology and broader mass adoption.

The further manufacturing of EVs will also help

the State in reaching its goals for 1.5 million electric vehicles on the road by 2025.

Governor Brown's Executive Order earlier this year called for that and this is one of those initiatives that will help the State move forward.

I'll note that we don't take any investments of public funds lightly and that being said, you know, I support this investment because it's leveraging other dollars as well.

I believe Tesla is providing $50 million or so in match funding for this, as well as it's leveraging the existing investments in your manufacturing line, and assembly line for the Model S.

And I look forward to these cars becoming cheaper over time, to the point where even some of us government employees can afford them.

But I applaud your efforts and I vote -- I would propose we hear this item.

COMMISSIONER DOUGLAS: Great, do we have a motion?

COMMISSIONER PETERMAN: Yeah, I'll move Item Number 7.

COMMISSIONER MC ALLISTER: I'll second.

COMMISSIONER DOUGLAS: All in favor?

(Ayes.)

COMMISSIONER DOUGLAS: The item is approved unanimously. Thank you.

MR. TAYLOR: Thank you.

COMMISSIONER DOUGLAS: Item 8, Alternative and Renewable Vehicle Buy Down Reservations; possible approval of a total of $2,548,000 in vehicle buy down incentive reservations.

Andre.

MR. FREEMAN: Good afternoon Commissioners, my name is Andre Freeman. I'm part of the Fuels and Transportation Division's Fuels and Technologies Office.

Today I'll be seeking approval of incentive reservations for 162 propane vehicles and 18 natural gas vehicles funded through the Alternative Renewable Fuels and Vehicle Technology Program.

As you know, the Natural Gas and Propane Vehicle Buy Down Program is designed to promote the purchase of alternative-fueled vehicles to replace the aging gasoline and diesel fleet.

This program provides incentives for consumers to adopt technologies which provide both environmental and economic benefits to the State of California.

You may notice a few familiar company names, as well as the presence of Natural Gas Funding, which I previously mentioned had run out.

As part of our reservation process dealerships have 120 days to utilize their reservations or they will revert back to the program fund.

Now that we're several months into the program we're beginning to see this and 45 of the propane bus reservations that are before you today are incentives have expired and the dealerships have requested new reservations for.

Additionally, the 18 natural gas vehicles are ones that went utilized before and are being allocated to dealerships that have previously used up the entirety of their previous allotment, so we expect those to go pretty quickly here, especially with the demand for natural gas vehicles.

I just wanted to mention about Commissioner McAllister's comment on Item Number 6 that, at Commissioner Peterman's request, we have met with our natural gas stakeholders, which we actually met with yesterday to talk about infrastructure and vehicle issues, and we are in the process of setting up a meeting with our propane industry stakeholders in the next week or two to figure out better ways to get the funding out and, you know, determine what's the best way to support the industry over the next few years here through the investment plan.

COMMISSIONER MC ALLISTER: Great, thanks very

much for that.

MR. FREEMAN: That's all I have so I'm available for any questions that you may have.

COMMISSIONER DOUGLAS: Thank you. Questions or comments?

COMMISSIONER MC ALLISTER: No, I don't have any questions. I think, you know, I got an independent briefing from staff on this and I'm comfortable with these incentives.

COMMISSIONER PETERMAN: I think this is another example of staff taking initiative to make sure that the funds are spent and that funds are spent in a timely manner.

I would encourage staff, as you know, to continue to reach out to some of the recipients of the funds, especially those who have since returned them, to understand more why they're not able to use the incentives in a timely manner.

But I'm glad we have opportunities to redirect them. And again, this is just an example of diversifying our fleet and providing options for those, particularly, who would like to use this fuel resource, so I'm supportive.

COMMISSIONER DOUGLAS: Great. Do we have a motion?

COMMISSIONER PETERMAN: Yeah, I'll move Item Number 8.

COMMISSIONER MC ALLISTER: And I'll second.

COMMISSIONER DOUGLAS: All in favor?

(Ayes.)

COMMISSIONER DOUGLAS: The item passes unanimously, thank you.

Item 9, Valley Garbage and Rubbish Company, Incorporated; possible approval of Agreement ARV-12-009 for a grant of $300,000 to Valley Garbage and Rubbish Company, Incorporated to expand the availability of compressed natural gas infrastructure.

Darren.

MR. NGUYEN: Good morning Commissioners. I'm Darren Nguyen from the Emerging Fuels and Technologies Office. I'm here to seek approval of a grant for Valley Garbage and Rubbish Company to construct a CNG fueling station to support its existing fleet of 27 private CNG-powered solid waste collection vehicles in the City of Santa Maria, in Santa Barbara County.

The total funding for this amount -- for this project will be $300,000 and the project team with provide $1,025,350 in match funds.

Currently, there's a lack of fueling within the region and the closest fueling station is 25 miles away.

The fueling station will provide a public access and convenient source of fuel to local and regional goods movement fleets along the Highway 101 corridor.

This critical infrastructure project will provide solutions to overcome significant refueling barrier that has hindered the development and wide spread use of natural gas a transportation fuel in the Santa Barbara region.

It will also demonstrate the feasibility of constructing, owning, and operating a public access station to supply low-carbon fuel for transportation.

The economic benefits will impact the immediate and long-term future by injecting capital into the local economy and contributing the ongoing fuel tax revenues.

It will also provide an annual displacement of over 245,000 gallons of diesel, more than 2,400 metric tons of GHG emissions, and over 19 tons of LX emissions.

Thank you for your consideration of this item. I would like to introduce Chuck White from Waste Management and he's here to answer any questions you may have.

MR. WHITE: Thank you very much, Chuck White with Waste Management. Valley Garbage and Refuse is a wholly owned subsidiary of USA Waste of California, which is a wholly owned subsidiary of Waste Management.

I could have brought a picture showing our corporate structure here in California and you'd see a

diagram of about 60 boxes, and this is one of the 60 boxes there. So, just to clarify, it is a wholly owned subsidiary of Waste Management, and that's the legal entity which will be a recipient of the grant, we hope.

We really appreciate the opportunity to receive support from the Energy Commission to expand our natural gas fleet and also provide public access.

As Darren mentioned, this is in the 101 corridor. The only other natural gas fueling stations is a privately -- it's not public access, within 25 miles. This is really on the 101 corridor so it will really provide a key stopping point for natural gas vehicles traversing between Northern and Southern California. And we're certainly doing everything we can to make sure people are aware of the existence of this station and make sure that it is available for the public to take advantage of, as well as our own expanding natural gas fleet that is really made possible with these sorts of grants.

So, we appreciate it and I'm happy to answer any questions, if I can.

COMMISSIONER PETERMAN: Mr. White, thank you for being here, and I appreciate your comment about taking efforts to do outreach to consumers so that they know that a station is available.

The public access component of this project is

one of the parts which is particularly exciting to me and to the Energy Commission. And we would encourage you to take those efforts to make folks aware, and we will do through our channels as well.

So, one question I have and I think some of my co-Commissioners may have this as well, is what's the difference between garbage and rubbish?

MR. WHITE: Darren mentioned this to me and I am somewhat prepped for that.

COMMISSIONER PETERMAN: Okay.

MR. WHITE: There is no difference between rubbish and garbage.

COMMISSIONER PETERMAN: We read every line, at least the name of the company.

MR. WHITE: This is a situation where Waste Management has gone in and purchased a prior operating corporation or company and maintained that legal entity. We didn't have anything to do with naming it, it was basically the company that was operating in that area before we purchased it. It's one in the same.

I think if it was a company getting started today it would say "refuse and recycling" rather than garbage and refuse. In fact, we might probably change it to that were it not the problems with going to all the modifications to our corporate structure in California.

But it is a wholly owned subsidiary of Waste Management.

COMMISSIONER PETERMAN: Thank you. Commissioners, other questions?

MR. WHITE: One more comment I did have, yeah, we're a member of the California Natural Gas Vehicle Coalition, that publishes a booklet every year of all the fueling stations for natural as in California and we'll make sure we get this fueling station in there, and other outreach efforts as well.

COMMISSIONER MC ALLISTER: Great, thanks. I'm thinking maybe it was founded by a Brit or something.

MR. WHITE: It could very well be.

COMMISSIONER MC ALLISTER: So, I was going to ask that question, but I'll ask another one. So, I'm wondering about the rates issue, sort of how -- on the public access side is there -- and this maybe just shows, you know, my lack of engagement in this particular issue.

But as far as how much a refuel costs for a natural gas vehicle that's coming off the 101 to refuel, you know, probably their own vehicle, are there -- where do you go to get rates approved or sort of decide what to charge these folks?

MR. WHITE: That's a good question and I didn't come prepared. I was prepared for the refuse and garbage

question, but not for the rates issue, but I can certainly get back to you on that.

COMMISSIONER MC ALLISTER: It would be interesting to know, actually. There may be infrastructure that I'm not aware about and a whole process to decide on that, but I just would like to know that.

MR. WHITE: We're going to try to put a price that will cover our costs, but I think generally you'll find that the public access stations owned by Waste Management are extremely competitive, really priced in terms of what you normally would see on the market for public access stations.

COMMISSIONER MC ALLISTER: And you know the price of natural gas is notoriously fickle, so sort of how that plays out going forward for public access -- having said that, I absolutely agree with Commissioner Peterman that that's a great aspect of this project, that public access is essential.

And particularly for certain kinds of vehicles it's something that we have to build out, and so it's really great to see this progress, so thanks.

MR. WHITE: Thank you.

COMMISSIONER DOUGLAS: All right, well thank you. I thought I was going to learn something about the difference between garbage and rubbish, but instead I

learned something, you know, about the corporate structure of Waste Management, so there's --

MR. WHITE: Well, I wish I could say they're a difference, but they're a complete synonym for each other, rubbish and garbage.

COMMISSIONER DOUGLAS: Super, all right.

COMMISSIONER PETERMAN: It's not an official --

MR. WHITE: I might have to find the original owner of that operation to find out what he was thinking, or she. Thanks.

COMMISSIONER DOUGLAS: Well, thank you Chuck, thanks for being here. So, do we have a motion on Item 9?

COMMISSIONER PETERMAN: I will move Item 9.

COMMISSIONER MC ALLISTER: I'll second.

COMMISSIONER DOUGLAS: All in favor?

(Ayes.)

COMMISSIONER DOUGLAS: The item is approved unanimously, thank you.

Item 10, Quallion LLC; possible approval of agreement ARV-12-010 for a grant of $2,230,595 to Quallion LLC to expand its manufacturing capacity for high volume integration of battery management system electronics into electric vehicle batteries.

Darren.

MR. NGUYEN: Good morning, again. I'm Darren

Nguyen from the Emerging Fuels and Technologies Office here seeking the approval of a grant for Quallion to expand its manufacturing capabilities to design, produce, and test advanced lithium ion battery measuring system, or BMS electronics.

Quallion will incorporate these electronics into batteries to meet the growing demands for electric vehicle applications.

This project is located in the City of Sylmar, in L.A. County. The project team will provide $2,235,863 in match funds.

Currently, the facilities are inadequate to accommodate the increased workload Quallion anticipates from electric vehicle projects and the large, high-volume equipment needed to support these projects.

This project will expand the company's production capacity for larger vehicle systems. The BMS is a necessary component to the battery and to the electric vehicle. The battery cannot charge or discharge without the BMS to keep it operating within certain safety parameters.

This funding will support the expansion of Quallion's electronics workshop into a larger space, with enhanced equipment for higher volume production and integration.

It will help Quallion transition its lithium ion battery applications into broader markets for hybrid and electric vehicles.

This project will provide significant positive economic benefits in a low-income area. Quallion anticipates that the electronics workshop can support 20 direct full time employment jobs and 40 indirect jobs as a result of the effect of manufacturing jobs.

This project will also support California's goals to expand the deployment of clean transportation technologies and ensuring there is local manufacturing base for these technologies.

Thank you for your consideration of this item. Alex Fay, from Quallion, would like to speak.

MR. FAY: Thank you, Darren.

COMMISSIONER DOUGLAS: Go ahead.

MR. FAY: Commissioners, thank you for having me and good morning. Like Darren said, my name's Alex Fay, I'm the Business Development Manager at Quallion.

Quallion is a veteran-owned small business in the Sylmar area of Los Angeles. That's a low-income area and a State enterprise zone.

We employ about 170 people in a variety of jobs, from PhD chemists, electrical engineers, mechanical engineers, down to assembly line technicians that come into

us with a high school education.

On behalf of the men and women of Quallion who come to work every day to be part of a great technology company, but also to put food on the table and put their kids through college, I want to thank you for your support on this award and previously to help us grow our company.

We are a small company and we take big capital investments very carefully, and so the support from the Commission to help us leverage our own investments and other Federal funding is really key to growing our company.

A little bit about Quallion, we manufacture batteries for advanced applications, niche markets, aerospace, medical devices, defense applications, and moving more into the transportation projects.

What all those things have in common is the batteries have to meet very rigorous performance requirements, much more so than what you see in you cell phone or your laptop.

But our company's history comes from Japan, where the lithium ion industry was borne to provide batteries for Walkman's, and cell phones and laptops in the early nineties.

The company was founded by a serial entrepreneur named Alfred Mann, who has a number of medical device companies, and he found there was a shortage of capable

batteries to support his medical devices, and so he had the foresight to go to Japan and essentially poach some of the brightest battery scientists from the Japanese battery industry, and bring them to California and start Quallion as an R&D center.

The company's grown out of that and is now in full production of medical device batteries, both for implantable devices and external devices. We make a battery that will extend the life of a heart transplant patient until they can come up to the top of a transplant list.

Leveraging that medical success, we moved into satellite production and developed satellite batteries that are able to power a satellite through over 100,000 charge and discharge cycles. That's over ten years orbiting the earth at a low-earth orbit. And these are for applications such as remote sensing for scientific missions, for national security, and also for communications technologies.

Our satellite technologies have been vetting and funded by the Federal government to the tune of $60 million to develop the infrastructure to build a vertically integrated process, where we can control the entire production line, from the raw materials, the lithium powders, and binders, and slurries that go into the

batteries, all the way through the finished product at a California facility.

And the Federal government's interested in making sure we have a secure supply of all those critical materials.

The benefit here is that we can use those same facilities to produce components for vehicle batteries and that's what we intend to do.

So, building on those advanced technologies that pushed our intellectual property and our manufacturing know how, we're really looking at new markets.

The challenges of a small company, we don't have the capabilities, now, to produce at scale to be cost-effective for vehicle applications. And that's where this money comes in and can help change that.

By supporting the BMS workshop we'll be able to integrate battery management systems with our batteries, design them, test them at a much higher rate and also safely deal with higher voltage battery management systems like those used in electric vehicles.

The BMS is a critical function, as Darren mentioned. It's the computer, it's the brain of the battery. It's a series of circuit boards and sensors that monitors voltage, current, temperature and other parameters in the battery to make sure it's operating safely.

A lithium ion battery is about as reactive as a bomb and when they blow up, bad things happen.

So the battery management system's primary job is to ensure safety.

From our background in mission-critical applications for the military and medical devices, we take that very seriously. So adding enhanced safety features into electric vehicles is critical because I think, as anyone here would agree, a big catastrophic fire on the freeway would probably drive a stake through the heart of the electric vehicle industry.

And they also improve performance. Most electric vehicles include a significant buffer capacity that is never used in order to ensure safety and extend life. Sometimes this is 40 to 50 percent of the entire battery. So, if you have a more advanced battery management system that can have smaller margins of error, you can reduce that buffer zone and essentially get much more performance, more range out of the same size battery.

This brings down battery cost, battery weight, and ultimately makes electric vehicles much more attractive.

Finally, to close, on a personal note, as a lifelong Californian and as a plug-in vehicle driver, I think it's great that my government, our government is

investing in these technologies to make our State a cleaner and greener place, and also has the wisdom to support manufacturing to ensure that our State benefits economically from the growing industry.

Thank you.

COMMISSIONER DOUGLAS: Thank you. Questions or comments, Commissioners?

COMMISSIONER PETERMAN: Yeah, I'll just comment. Alex, thank you very much for that further background on Quallion, and the history of the company, and how that's gotten the company to this point.

As you noted, the AB 118 Program, the Commission has supported the company previously and it is good to see your advancement and your desire to further scale your work in this area.

You know, I am supportive of this investment for all of the reasons that Alex has laid out in terms of both improving the quality, and the safety, and the availability of electric vehicles in California.

MR. FAY: I might add there's a lot of synergies here between the two programs. They're distinct, but essentially our current-funded program is building cells and modules, and then this program will come on top of that with the battery management system, so that with this production facility we'll be able to deliver a complete

battery.

And I think there's also potential synergies with other CEC companies, other ones today, Tesla, Zero, we talked to Boulder Electric Vehicles about how we might be able to use our products as demonstrations in their vehicles. A battery's not worth much on its own, you need a device that it's going to power.

And I think that's a great story that we can make an all-California made vehicle and battery.

COMMISSIONER MC ALLISTER: Well, you partially answered my question, actually. I was kind of wondering about whether, you know, are you producing the whole battery assembly with the charge device, the charging assembly as a whole, or are you also looking at selling the charging assembly to sort of put on other folks' batteries. I guess maybe that's a business thing you can't talk about.

But trying to get a sense of what your market niche that you're aiming at is. You know, it sounds like a fairly small company and producing batteries is a fairly industrial process, and so I'm kind of, you know interested in hearing about how you've managed to sort of keep it small and focused, but at the same time doing the high quality that you're obviously doing if you're getting batteries into satellites.

MR. FAY: Sure.

COMMISSIONER MC ALLISTER: So maybe you could talk about that a little bit.

MR. FAY: Yeah, so just as you heard earlier from Tesla focusing on a niche to get started, they're just focusing on high-end vehicles where the margins are high enough to support continued R&D and attract more investment, we've had a similar strategy focusing on higher margin products in medical devices, in satellites, and other military projects.

COMMISSIONER MC ALLISTER: Uh-hum.

MR. FAY: And what we see is there's a lot of synergy in similar applications. So, I think the most immediate customers for the products that will come off this line will be our battery modules that are going into military ground vehicles and military renewable energy storage projects.

These are perfect analogs for the kind of things we'd like to see in the commercial grid and on our commercial streets, but the price point just doesn't pan out to do full-scale adoption here, stateside.

But when you're in the deserts in Afghanistan and the full-in price of fuel is about $500 a gallon, not including the cost in life of transporting that through fuel convoys, the military puts a very high premium on fuel efficiency.

So to that end they've supported R&D to develop batteries to store renewable energy that's generated from distributed, solar and wind resources. We've build batteries for that, as well as projects to develop vehicles that can export power to recharge devices in the field. So, essentially function as nodes on a self-contained micro-grid.

And so all those projects, I think, are the first early adopters here that can support the technology at its current scale.

Based on that, proving out the technology and helping support our company's decision that this is a market that's real and exists, we can move ahead into larger production. And that would require further enhancement of our facilities.

Like you said, a battery factory that you might see Japan, Panasonic, or Sanyo, or any of these guys, that's hundreds of millions of dollars, it's the size of a football field and it runs day and night. We're not at that scale.

We may never be at that scale but I think to your point, because we're vertically integrated we can find points in the value chain that make sense whether we own it, or whether we outsource it, or whether we sell it.

So in many cases our customers are also our

competitors in some cases. And depending on the project we might sell these DMS technologies, or license them to a company like Tesla, or Zero, or someone else so that they can use their manufacturing expertise and their scale to take advantage of our intellectual property.

In other cases, in our niche markets we would probably use those ourselves to improve the performance of our own batteries.

COMMISSIONER MC ALLISTER: Right. Great, thanks for that, I really appreciate your level of knowledge and articulateness on these issues. I think, you know, batteries are a fascination of mine, for sure. And I will resist the temptation to talk about, you know your charging algorithms and, you know, how many FETs you're using and things like that.

MR. FAY: We can do that later.

COMMISSIONER PETERMAN: Probably get a briefing schedule for you.

COMMISSIONER MC ALLISTER: We can talk about that offline, I'm sure.

I would -- you know, this is a fascinating topic, it's one of these things that there's not that much information out there about and we rely on batteries every day and never see them, really.

But there's a nice little euphemism for the --

like lithium ion batteries are highly exothermic in the charge/discharge, right, so they produce a lot of heat, and you have to get rid of that heat. That's part of the limitations of those batteries.

And I got a letter -- well, in the course of my research I saw a letter talking about this, you know, one explosion in a laptop on somebody's lap, or in a cell phone while you've got up to your ear is just, you know, a nightmare for the companies, right, so they really want to avoid that.

And the term that they use for it is rapid deconstruction.

MR. FAY: We have another euphemism, thermal runaway.

COMMISSIONER MC ALLISTER: There you go, yes, exactly.

MR. FAY: But, basically, you don't want to nearby when one of these goes off.

COMMISSIONER MC ALLISTER: It sounds exciting.

MR. FAY: We've done some testing in our plant, we blow up a battery every once in a while and it's always the most fun, all the engineers get together and like to watch it.

COMMISSIONER MC ALLISTER: Yeah, I bet.

MR. FAY: We'll invite you to come down next to.

COMMISSIONER MC ALLISTER: Yeah, I'd love. I spend a lot of time in Southern California, so it's not that far away.

COMMISSIONER PETERMAN: And, Commissioners, I'd also like to add I participate in a number of public transportation energy forums and Quallion, and Mr. Fay in particular, has been very active on panels, communicating with a variety of stakeholders.

And that's the same for Chuck White, who was here earlier, and folks who will be presenting, companies who will be here for further items related to the transportation program, and that's greatly appreciated.

I know you all are very busy growing your companies and oftentimes you don't get to hear from those with the technical expertise, and I appreciate the efforts that Quallion has taken to communicate with communities, with various levels of government, with our environmental stakeholders and helping all parties to understand these complex and exciting technologies, as Commissioner McAllister has noted.

So, thank you for your engagement and look forward to continued engagement by Quallion, as well as others who are here with us today.

MR. FAY: Sure, whenever there's an opportunity for us to speak directly to policymakers and make sure they

understand the technology and the market forces that are driving that, whether they're good, bad or indifferent, we like to take that opportunity. And the world of batteries, it's not all rosy. There's a lot of battery companies that are going out of business because they're over-built and the demand isn't quite there yet. So, you know, it's important to know all these things and we're happy to be that resources for the State.

COMMISSIONER MC ALLISTER: I really appreciate that. I did a project in Bangladesh once, this is maybe a little bit of a tangent, but batteries are something that are really behind the scenes and we kind of take the ability to store energy for granted, but it's actually really expensive to do that. And it's something that in the current reality in California we're really looking at developing the technologies for.

So, some of these storage applications and, you know, Smart Grid-related applications and all that I think are really relevant here, whether it's in the transportation realm or the other realms that we work in.

But, you know, I looked at the lead acid battery supply chain, really, in Bangladesh for Remote Power, and there were children, essentially, in unventilated rooms, replacing individual plates in lead acid batteries, with no ventilation, with no masks, you know, back there because

there was a need for this power and, obviously a very different setting, a developing country, very poor.

But that impacted me tremendously about how much technology can improve a situation. If we can improve that supply chain, make it affordable, make it safe, make it reliable that can have an impact all of the world. It's not just the high techs market in California, it's actually really important much beyond that because there are billions of people who miniscule quantities of energy compared to what we do here, but could really benefit from advanced batteries that are affordable.

So, I think, you know, it's part and parcel of -- not that California, not that that's front and center for us here, in our policy discussions today, but I think there is a global view of this that elevates its importance.

So, thanks again for coming in, I appreciate it.

MR. FAY: From our perspective, I think the investment that the Federal government and the State government here make to improve these technologies is going to give us great expert opportunities when the rest of the world catches up and has growing demand for these things, and we're going to be in a great position to take advantage of that as a result of these investments.

COMMISSIONER DOUGLAS: That's great. So, do we have a motion on this item?

COMMISSIONER MC ALLISTER: I will move Item 10.

COMMISSIONER PETERMAN: I'll second.

COMMISSIONER DOUGLAS: All in favor?

(Ayes.)

COMMISSIONER DOUGLAS: Item 10 is approved, so thank you, thank you very much for being here.

Item 11, Zero Motorcycles, Incorporated; possible approval of Agreement ARV-12-006 for a grant of $1,815,123 to Zero Motorcycles to expand the company's full electric motorcycle production capacity in scale with systematic redesign and manufacturing line improvements.

Jared.

MR. CACHCO: Good day, Commissioners. My name is Jared Cachco from the Emerging Fuels and Technologies Office.

Before we begin I'd like to note a typographical error that was sent out on the agenda notice. The correct amount of funding for the grant should read $1,815,123. This amount has been announced previously in the notice of proposed awards for the corresponding solicitations and is on record here at the Commission.

I'm here to ask approval for a grant to Zero Motorcycles for their project title, "Strategic Expansion of Volume Manufacturing Capacity for Electric Motorcycle Production Project."

Zero Motorcycles Designs manufactures and sells high-performance electric motorcycles, based in Scotts Valley, both the manufacturing facilities and jobs reside here in California.

They plan to expand their production capacity in anticipation of their model year 2014 products. Zero Motorcycles estimates they can quadruple their manufacturing capacity with our funding and have matched the grant with $1.8 million of their own.

The project will advance the manufacturing techniques used to produce electric motorcycles today and it is an unique opportunity to expand green tech manufacturing on the Central Coast.

California manufacturing allows Zero Motorcycles to achieve high quality and better process control and this will keep the competitive advantage of a skilled labor force.

At least a dozen direct jobs will be created, adding to the 80 individuals Zero Motorcycles currently employs. These new jobs will be mostly manufacturing jobs, including technicians and mechanics.

This project will help a small California start up grow to a more established manufacturer of alternative energy vehicles, providing a platform dramatically increasing the production capacity of efficient and

practical electric motorcycles.

Staff requests the Commission's support and approval of this project.

And Jay Friedland from Zero Motorcycles is here, as well, to say a few comments and answer any questions you might have.

Thank you for your consideration.

COMMISSIONER DOUGLAS: Great. Well, welcome and we'd love to hear from you.

MR. FRIEDLAND: Thanks. Hi, I'm Jay Friedland, I'm the Vice-President of Strategy and Sustainability for Zero Motorcycles.

I want to thank the Commissioners for all your support and for hearing this particular item.

Zero started in 2006, in a classic kind of garage scenario. The first run of motorcycles was 24 motorcycles that were hand-built, hand-welded and hand-built. And two years ago we grew to about 55 employees and now we're about 80 employees.

So, we're a little smaller than Tesla, but I think our customers are no less excited about the product which is, I think, one of the really, really interesting thing about this part of the market.

Electric motorcycles have actually seemed to be taking the market faster than electric vehicles, you know,

on the whole and I think that's because the parity in terms of performance and in terms of the expectations of the consumers is quickly, you know, sort of really, really matching.

And so we've sold over 2,000 vehicles so far, so that's a pretty exciting number for us. And these are fully freeway-capable vehicles. In fact our latest models that we just announced last week have 137 miles of range, up to 137 miles of range and top speeds of 95 miles an hour, although we would not recommend that people drive those on State highways, et cetera.

They're true zero emission vehicles and they impact, as Tom Turrentine likes to say, E-VMT, so electric vehicle models traveled. And, you know, what we're doing is really thousands of miles per vehicle per year is actually be replaced, so petroleum, GHG being replaced with these vehicles.

The Energy Commission's been incredibly supportive of our company. You know, we really got to this efficiency and power in the latest model leveraging a CEC grant that was basically approved almost exactly two years ago at an October business meeting in 2010.

That grant basically funded the research and development for our power train which, again, last week was introduced, and that power train is literally twice the

power of our previous model year. So, from 2012 model year to 2013 model we doubled the power to over 54 horsepower.

And again, so if you're a motorcycle rider, that's the equivalent of sort of at least a 500 cc class motorcycle and that's really, really, again, compelling for consumers. And that's really where we want to be, we want consumers buying these products.

The other thing that's really exciting is that that project created eight jobs and that team is in place and continuing to innovate. And it's engineers and high-quality, high-paying jobs, so really created a great set of jobs. And that team, again, like I said, is in place and growing.

As I said, in the process we went from 55 employees to 80 employees. So, we believe that the CEC grant really actually helped our entire company grow to the point where it's at.

So again, we really want to just thank you for your past support and look forward to being able to quadruple our capacity and grow from about a thousand motorcycles a year, as what our capacity is today to, again, we'll get to 4,000 motorcycles a year which will really, again, have a significant impact.

COMMISSIONER DOUGLAS: Well, thank you. Thanks for being here. I know we've probably all got questions

so --

COMMISSIONER PETERMAN: Well, I'll just start and say Jay is another enthusiastic and active participant in clean energy education, and advocacy and awareness, and good to see you in this different hat.

And I'd offer the same comments that I offered when we considered the Tesla grant, and that these vehicles will help the State have cleaner air, lower greenhouse gases, provides manufacturing jobs, and really is moving the State in the direction which we'd like to go.

And appreciate the commitment that you have made to California and to the zero emission space. And I'm supportive, highly supportive of this grant.

COMMISSIONER MC ALLISTER: I don't have any battery-specific questions. But I am wondering how someone might chop one of your motorcycles?

MR. FRIEDLAND: There's actually -- it turns out there's actually a company down in Southern California called Hollywood Electrics, that likes to customize our motorcycles, and they have been doing this now, they've been a dealer now for about three years. And they have done Café Racers, they've done a variety of different things with our platform, so it's kind of interesting.

And to address your battery question, we actually have on interesting fact about our batteries which is we

have the highest watt hours per liter, so what I want to say is volume metric efficiency. Because, basically, you have to pack all those kilowatt hours between your legs when you're right and you also -- it's very important, it's between your legs so not only your -- you're sitting on it, but you really -- it's between your legs so it's very, very important that the technology's safe.

So, on our current model we have 11.4 kilowatt hours, you know, in the frame of the motorcycle. So, if you think about that, that's almost half of a Nissan Leaf inside -- inside this very, very small-framed electric, very light-weight electric motorcycle. So, we've really pushed the envelope in terms of being able to get to that volume metric efficiency.

COMMISSIONER MC ALLISTER: So, just to put that in perspective that's what, roughly about 20 car batteries?

MR. FRIEDLAND: Yeah, exactly. Exactly.

COMMISSIONER MC ALLISTER: Okay.

COMMISSIONER DOUGLAS: So, you know, I guess I'll just comment that I remember well when you guys came here in 2010 and in part this grant got my attention because, you know, when I was a kid I did tool around town on a little scooter, it was obviously gas, but I remember.

You know, I really strongly believe that it is important to move this technology into different parts of

the marketplace. So, I think electric bikes are great. I think, you know, electric motorcycles, and scooters, and sports cars and SUVs are great. The more than we can -- the more that we see this technology diversify and take off for different parts of the marketplace, and consumers who are looking for different types of experiences and performance from their vehicles, you know, the better off we're going to be and the faster we're going to get to goal on zero emission technology.

So, anyway, I'm strongly supportive as well and wish you the best of luck with that. You know, I do not have an electric motorcycle, I don't think -- you know, but I do have a little kind of old electric bike and it is fun to tool around town on that. And when you're pulling two kids in a trailer, and it's a hundred degrees out, it's kind of nice.

So, you know, there's a niche for all sorts of vehicles out there and it's really good to see.

So, with that let me just see if there's a motion for Item 10.

COMMISSIONER PETERMAN: I'll move Item 10.

COMMISSIONER MC ALLISTER: And I'll second.

COMMISSIONER PETERMAN: Oh, wait, I'll move Item 11.

COMMISSIONER MC ALLISTER: Item 11.

COMMISSIONER DOUGLAS: My bad, Item 11.

COMMISSIONER PETERMAN: You only get one grant, Quallion.

(Laughter)

COMMISSIONER PETERMAN: I move Item 11.

COMMISSIONER MC ALLISTER: And I'll second.

COMMISSIONER DOUGLAS: All in favor?

(Ayes.)

COMMISSIONER DOUGLAS: The item is approved unanimously. Thanks for being here.

MR. FRIEDLAND: Thank you, thank you very much.

COMMISSIONER DOUGLAS: Absolutely.

So, on to Item 12, City of Mt. Shasta; possible approval of agreement ARV-12-007 for a grant of $200,000 to the City of Mount Shasta to provide a Comprehensive Plug-In Electric Vehicle Plan for Siskiyou, Shasta, and Tehama Counties.

Jared.

MR. CACHCO: Yeah, another one of mine. With this funding the City of Mount Shasta will create a plug-in electric vehicle or PEV Coordinating Council to create a comprehensive PEV readiness plan for the upstate region, which includes the counties you have mentioned.

This grant is similar to other PEV readiness awards that have been awarded and brought forward in the

past, most recently for Monterey, Southern California in Coachella Valley, all of which were approved last April.

This particular grant is the tenth and final award of the solicitation for the regional plan's support of PEV readiness.

The regional plan to be developed within two years will include planning for electric vehicle charging infrastructure at various sites. These sites include single- and multi-unit residential dwellings, workplaces, fleets, commercial and public locations, as well as long traffic corridors.

The Council will coordinate with utilities, automakers and local governments to provide consumer education and outreach, and they will also streamline processes for charging infrastructure such as permitting, installation and inspection practices.

The successful introduction of PEVs will require coordinated efforts among key stakeholders to overcome obstacles and ensure smooth market development, and this project addresses that need.

Much of the focus on early market development has been the State's metropolitan areas, but there is also a need to provide planning activities in the State's rural communities.

Coordinated PEV infrastructure in the up-state

region will also help to link areas along the Interstate 5 corridor.

And petroleum displacement and pollution reduction benefits will come as an indirect result of this plan.

Staff requests the Commission's support and approval of this project.

I'll be happy to take any questions you might have.

By the way, the City of Mount Shasta and their partner, the Siskiyou County Economic Development Council send their regards and they're excited to be considered for this aware as well. Thank you.

COMMISSIONER DOUGLAS: Great. Well, thank you very much.

Questions or comments, Commissioners?

COMMISSIONER PETERMAN: Thank you, Jared, for that presentation. I'll just make a comment that, as Jared noted, this is the last of the planned PEV readiness grants. And I think this has been a very successful grant category for the AB 118 program.

We've spent a good portion of the day talking about opportunities for the vehicles and opportunity for manufacturing some of the fuels. And what these grants are about are about making sure that communities are ready to

accept these alternative vehicles, that they have -- that they're in compliance in terms of access for ADA compliance, that there's appropriate signage.

And considering the amount of money each grant is, a couple hundred thousand dollars, the impact and the education it can have as a part of that I think will go a long way.

And so I'm very supportive of this effort that the Commission is engaging in, and particularly expanding the readiness grants to include more rural areas and making sure that all Californians have access to plug-in electric vehicles and alternative transportation.

Commissioners, do you have any questions?

COMMISSIONER MC ALLISTER: I'd just -- well, not substantive, but I just want to commend the Fuels and Transportation Division, and Commissioner Peterman on, you know, pretty much the whole agenda so far today has been transportation and, many, many impressive initiatives. They all add up to a pretty impressive whole, comprehensive approach, which is exactly what the State needs, and I think that's very, I think, impressive and positive.

And, obviously, 118 has sort of provided the guidance and possibilities there, but just the implementation has been so well done that I think we're -- as a State we're really benefiting from it. So, I just

wanted to give my kudos to the team.

COMMISSIONER PETERMAN: Thank you, Commissioner McAllister. Indeed, it has been a team effort. There have been a number of people within the Commission, within the Transportation Division, within the Executive Office that have worked to make sure that we continue to implement this program successfully.

And every day just gets better and I think what we've seen today in terms of the array or projects really represents the diversity of fuels and projects across the State that we support. I think it's also representative of the Commission's ability to continue to deal with kind of cutting edge issues, as well as the nuts and bolts of getting money out, getting money out to sometimes applicants who are less familiar with State contracting processes. And there are a lot of folks who don't come and present at the business meeting, but are in the back office, who are doing their best to get these contracts out in a timely manner, while still maintaining transparency.

And I think that's a really important point to make that sometimes there is that balance between efficiency and transparency. And I think the staff does a great job about communicating with the public, with stakeholders, and presenting this information in as many forms as we can.

So, thank you for your support of the group's efforts.

COMMISSIONER MC ALLISTER: Should I make a motion? Yeah, I'll make a motion. This is Item 11 --

COMMISSIONER PETERMAN: It's 12.

COMMISSIONER MC ALLISTER: Oh, 12.

COMMISSIONER PETERMAN: It turns out we can't count when the Chair's not here.

COMMISSIONER MC ALLISTER: Yeah, we can ask lots of great questions but we can't count.

COMMISSIONER DOUGLAS: We can't agree to what item we're on. We're on Item 12.

COMMISSIONER MC ALLISTER: Okay, so I'll move Item 12.

COMMISSIONER PETERMAN: I'll second that.

COMMISSIONER DOUGLAS: All in favor?

(Ayes.)

COMMISSIONER DOUGLAS: Item 12 has just been approved unanimously. Thank you.

MR. CACHCO: Thank you.

COMMISSIONER DOUGLAS: Item 13, University of California, Berkeley; possible approval of Contract 500-12-003 for $200,000 with the Regents of the University of California on behalf of the Berkeley campus to develop a guidebook on Title 24 benefits for local governments as it

pertains to natural gas efficiency standards for new and retrofits of commercial and residential buildings.

Dan.

MR. GALLAGHER: Good morning Commissioners, my name is Dan Gallagher and I'm with the Energy Research and Development Division.

I am here today requesting approval of this contract that will provide an analysis of Title 24 benefits to local governments. This research will be conducted by an interdisciplinary team at UC Berkeley, including the Center for Resource Efficient Communities, the Center for the Built Environment, and the Fisher Center For Real Estate and Urban Economics at the Hass School of Business.

The California Energy Commission has the authority to adopt residential and nonresidential building efficiency standards for newly constructed buildings, as well as additions and alterations known as Title 24, part 6, to minimize energy consumption and environmental footprint of buildings.

These standards are not directly implemented by the Commission but, instead, must be implemented by the 530 plus local building departments across our State that issue permits for and inspections of construction activities.

The achievement of the standards-predicted energy and cost savings is therefore dependent upon vigorous

implementation enforcement by these local agencies.

Research providing information on the net benefits to local governments from the standards and other building efficiency standards is needed to inform future regulatory development and ensure that present and future energy efficiency and greenhouse gas emission goals are achieved.

According to the Air Resources Board, buildings represent the second largest source of California's greenhouse gas emissions. In order to reduce greenhouse gas emissions and natural consumption, while promoting more renewable energy sources and diversifying fuels, it will be necessary to design and retrofit buildings to be more energy efficiency.

Since 1978, when the building energy-efficient standards were first adopted, per-household consumption of natural gas has dropped from 838 therms to 454 therms, a reduction of nearly 48 percent.

Since the major standards update in 1998, per-household natural gas usage in California has dropped from 609 therms to 454 therms, a decrease of more than 25 percent.

This project will research and document the environmental, economic, and equity cost and benefits to local governments of mandatory Title 24, part 6, and

voluntary natural gas efficiency standards both for new buildings and for retrofits of existing commercial and residential structures.

The product of this work will be analysis of Title 24 benefits directed at the 530 plus local building departments across our State that enforce the building efficiency standards and implement energy efficiency upgrade programs, as well as select policymakers in those municipalities.

This analysis will be accompanied by an outreach program conducted in coordination with the Governor's Office of Planning and Research, as well as the Air Resources Board.

Staff has coordinated this research with both the Energy Efficiency Research Office and the Buildings Standards Office, who are very supportive of this project as it will assist them in communicating to city and county decision makers the value and benefits of compliance with the building energy efficient standards.

The Building Standards Office will review all deliverables.

Each California city and county has a building department with responsibility for enforcement of the building energy efficient standards. And with the current economic times, they report that they are severely under-

staffed.

This analysis will provide local governments with explanation and documentation of the benefits their city or county will receive through increased compliance with the building energy efficient standards.

With this increased knowledge the city and county decision makers can make more informed decisions on resource allocations within their building departments to achieve compliance with the standards and realize the full range of benefits.

Local governments that support this project, as the analysis will be both useful and used by them, include the City of San Francisco, the City of Berkeley, and the City of Chula Vista, and San Diego County, of which we received letters of support.

The research team leads from UC Berkeley's Center for Resource-Efficient Communities are here today to speak in more detail to the proposed research project, as well as to answer any questions.

COMMISSIONER DOUGLAS: Thank you. Come on forward.

MR. EISENSTEIN: Good morning. I am Bill Eisenstein, I am the Executive Director of the Center for Resource-Efficient Communities at UC Berkeley, and I appreciate your time and consideration of this potential

contract.

I did want to reemphasize and supplement some of Dan's comments with, as he said, a little more detail about some of the issues that we'll be investigating.

First of all, to reemphasize we are -- this is going to be a fairly comprehensive look at this issue, so Title 24, part 6 is central to the building codes that we will be examining, but we are also going to be looking at situations where local governments, local agencies may have programs that exceed Title 24 standards, as well as some of the retrofit activity that's now occurring under the AB 758 initiatives.

And so we are looking at all types of development, essentially, both new and existing and including both residential and nonresidential, as Dan mentioned.

We see this research as very essential not only to encouraging more -- encouraging vigorous implementation of the standards that do exist today, but also in looking down the line at the more upgraded standards that are going to be coming into force in future years, and to ensuring that those standards both respond to some of the issues that may exist in local agencies, as well as are then vigorously enforced and implemented by those local agencies.

So, some of these potential benefits and costs that we're proposing to look at include things like the direct energy savings that local governments, themselves, may experience through more efficient buildings, that's a fairly obvious one.

But perhaps less obvious to many is the indirect fiscal benefits that local governments experience from improved energy efficiency and natural gas efficiency. So, these could be things like avoidance of hospitalizations and missed work days due to public health issues in local populations related to reduced emissions of natural gas-related air pollutants.

There's job creation effects, potentially, from required efficiency upgrades.

There can be local sales tax and local property tax benefits from improved efficiency of buildings and improved property values. There's already some literature documenting those sorts of improvements.

And then we also have the ways that those property value increases are reflected in tax revenues which, of course, are to the benefit of local governments and their priorities.

And as Dan mentioned, we are very much in a climate of budgetary constraint, budgetary scarcity for many of these local governments, so these are important

factors.

I did want to emphasize, as well, that the research will, in addition to looking at those issues directly and drawing upon existing literature, will also be identifying issues and concerns surrounding implementation of the standards that may either incentivize or impede achievements of the potential benefits.

The critical factors that affect the level of costs and benefits to local governments, the degree to which any of those benefits and costs vary across the State, different regions have different characteristics, both socially and climatically, and so the benefits may vary.

And then also looking ahead to potential long-term benefits from future efforts to meet more ambitious natural gas efficiency standards so, again, in recognition that this isn't the end of the road but in fact the beginning, in some ways, of a steeper upgrade trajectory toward your zero net energy goals, for example.

So, we'll be doing this through a lot of direct contact with local agencies and building department officials, and building policymakers at the local level that our methods will be driven heavily by robust interviewing and contact with those folks, both in the formulation of the study and the research.

And then particularly, as Dan emphasized, in the outreach phases when we do have the guidebook produces, we will be working with all the partners Dan mentioned as well as, I might add, CEC staff who, of course, have many contacts in that world, to get the guidebook into the hands of the people who really can and should benefit from it.

So, with that I think I'll thank you and ask for your questions, if you have any.

COMMISSIONER DOUGLAS: Great, thank you. We also have public comment from Mark Palmer, with the City and County of San Francisco. Mr. Palmer, are you on the line?

I'll just note that somewhere buried on my paper, Mark Palmer, from the City and County of San Francisco, did send a letter in on this topic, supporting this agenda item. And so, you know, we can certainly docket this letter.

He points out, "San Francisco's very strong energy efficiency and sustainability policy, and notes that the study will provide valuable information to help local governments make wiser building policy decisions and achieve better implementation of energy efficiency standards."

And so, he wrote in, strongly supporting the program, the project.

And Mr. Palmer, if you're on the line, just go

ahead and speak up and you'll have a chance to make comment.

I just had a brief question for you. It looks to me from the write-up that you're really focused on the natural gas aspects of the standards, is that correct?

MR. EISENSTEIN: Yes.

COMMISSIONER DOUGLAS: Okay, that's my only question.

COMMISSIONER MC ALLISTER: I'll just -- Commissioner Peterman, did you want to make a comment?

COMMISSIONER PETERMAN: I'll just make a comment and then I imagine Commissioner McAllister, since you're more familiar with the topic, you'll have more to say.

I just think it's great that you are reaching out to local governments. A lot of products come out of this Commission, a lot of work, and I know that local governments are slimly staffed. And to the extent we can really highlight some of the benefits and opportunities from some of the regulations that are passed, or the work that's been done, and really focus on their needs and identifying the value for them, I think is great.

COMMISSIONER MC ALLISTER: So, is Mr. Palmer not -- are you hearing him on the line at all, anybody? No.

So, yeah, let's see, I want to just highlight the

importance of the local government connection along the lines of Commissioner Peterman's comments, and really that they have incredible limitations right now, yet they are empowered and indeed required to enforce the law of the land, of which Title 24 is a part.

And so it's difficult to manage for many local governments, most at this point, local governments. And the -- as we get towards zero net energy and really, the way we are today, you know, there are highly technical topics that come up with new construction and with just building projects in general. And there are a lot of new technologies coming out.

And the sort of permitting offices, the inspectors, those communities I think sometimes struggle with keeping up to date.

They're also under lots of different pressures at the local level that don't always combine very well with, you know, thick new standards.

So, I think it's really important that we work out ways to encourage and allow them to enforce the law as it is and sort of take some of those conflicts off of their plate, and homogenize, and streamline, and all of that kind of stuff and really make it more of a team effort.

And I think this is one great activity to figure out how to do that, so I appreciate this.

I'd also highlight that internally, to the Commission, you know, the PIER Program and the EPIC Program to come are highly -- they're extremely important for informing the policy areas across the Commission.

So, as the lead on energy efficiency, this particular activity is really important to me and I'm glad to see that the building standards group is engaged and will be reviewing, and sort of gut checking some of the stuff you guys come up with.

Also, I'll note that AB 758, we just had two workshops that were highly productive and very interesting, Monday and Tuesday of this week.

That legislation that we're implementing, really on the front end of implementing, enforcement and compliance is a very important front and center aspect of what we need to accomplish in the implementation of that legislation.

And so this project, and potentially others like it, will help us provide the right kind of flesh to the bones of the legislation to make sure that we can do it effectively and with as much consensus as we can garner in the marketplace.

So, for all those reasons, I think this is a great project and it fits well within a strategy that will really get us where we need to go for the long term. So,

that's for your presentation.

COMMISSIONER DOUGLAS: Great, good comments.

I understand that Mark Palmer might be on the line, but we're still having trouble connecting so --

MR. PALMER: Hello, this is Mark.

COMMISSIONER DOUGLAS: Oh, we hear you, go ahead.

MR. PALMER: Hi, I understand you may have read the testimony. Should I go ahead and deliver it?

COMMISSIONER DOUGLAS: I really summarized just a little bit of it. Why don't you go ahead -- you don't need to read it, but you can certainly underscore any key points that you'd like to.

MR. PALMER: Okay. Well, Commissioners, thank you very much for taking my comment today. And my name is Mark Palmer, I'm the Municipal Green Building Coordinator for the City and County of San Francisco, and I'm deeply involved in formulating and implementing San Francisco's building policies, especially those to do with energy efficiency and sustainability.

The City and County of San Francisco has very strong policies in this regard, with requirements that new commercial buildings be LEAD certified and that all new buildings achieve a 15-percent margin beyond Title 24 2008 standards.

And to adopt or to maintain this type of a REACH

code local governments must complete a cost-effectiveness study, and local elected officials must make a finding that the Energy Efficiency Board requirements are cost effective.

And as Title 24 2013 narrows the gap between code minimum and best practice, particularly for nonresidential buildings, it increases the importance that the cost-effectiveness study be robust.

And this project, the “Local Governments Benefits From Building Energy Efficiency Standards Project” could enhance or be the basis for San Francisco’s cost-effectiveness study.

And more generally, the study will provide valuable information that will help local governments make wiser building policy decisions and achieve better implementation of energy efficiency standards, and especially as those standards become stronger over time.

And many local governments are highly cost conscious and under strong budgetary pressure, so information on the economic and fiscal benefits of building energy efficiency standards is very timely and important.

Overall, I strongly support the project and urge you to approve it. Thank you very much.

COMMISSIONER DOUGLAS: Well, thank you. thanks for your comments and thanks for hanging in there with us.

Do we have a motion on this item?

COMMISSIONER MC ALLISTER: I'll move Item Number 13.

COMMISSIONER PETERMAN: I will second.

COMMISSIONER DOUGLAS: All in favor?

(Ayes.)

COMMISSIONER DOUGLAS: The item's approved unanimously.

MR. EISENSTEIN: Thank you very much.

COMMISSIONER DOUGLAS: Thank you.

Item 14, County of Santa Clara; possible approval of Agreement 003-12-ECF for a $2,991,209 Energy Conservation Assistance Act Loan to the County of Santa Clara to fund energy efficiency upgrades at the County Government Center.

Amir.

MR. EHYAI: Thank you and good afternoon, Commissioners. My name is Amir Ehyai and I'm with the Special Projects Office.

I'm here seeking your approval today of a low interest rate Energy Commission loan under the EECA Loan Program to the County of Santa Clara.

The County of Santa Clara has requested a $2,991,209 loan to fund several energy efficiency measures at the County Government Center facility located in San

Jose.

When complete, these projects will contribute significantly to an effort currently underway to operate this building as a zero net energy facility.

A bit of background, in 2001 the County commissioned and energy study to develop a zero net energy strategy for the County Government Center. This strategy includes use of solar photovoltaic panels, renewable fuel cells, and a host of energy efficiency measures.

The solar PV system is currently operational and the fuel cells will be installed within the next few months.

The county is also negotiating a contract to supply the fuel cells with biogas so that the system's electricity will be renewable.

In total, the solar PV and fuel cell projects will generate an estimated 61 percent of the electricity use at this facility.

The remaining 39 percent of the building's annual baseline electricity use and 61,000 therms of natural gas use will be eliminated with the implementation of a broad range of energy efficiency measures.

It is these energy efficiency measures that will be funded with the Energy Commission loan.

The County Government Center is a large, multi-

story facility encompassing 400,000 square feet of office space. The facility was built in 1976.

The projects to be funded with the Energy Commission loan include a comprehensive lighting system retrofit, which will include occupancy-controlled LED task lights in lieu of reduced overhead lighting, high-efficiency T-8 floor lamps and ballasts, installation of occupancy sensors and daylight controls among -- and among other lighting measures.

IT projects include consolidation and virtualization of computer servers and the installation of desktop computer management software.

Plug load will be further reduced with the use of occupancy-controlled Smart power strips.

HVAC and mechanical projects include upgrades to convert the chilled water plant to an all-variable-flow chilled water plant. Two new condensing boilers will replace standard efficiency boilers in the boiler plant, and variable frequency drives will be installed on a number of pumps and motors to maximize efficiencies during part-load conditions.

Once these projects are complete, the new equipment will be commissioned and fault-detection software installed to monitor the energy systems and ensure long-term persistence of the savings.

In total, these projects will reduce annual energy use by approximately 3.1 million kilowatt hours of electricity and 61,000 therms of natural gas. These projects will save the County over $470,000 in annual energy utility costs and will reduce annual greenhouse gas emissions by approximately 1,447 tons of CO2.

These projects also qualify for upwards of $320,000 in utility company incentives.

Staff has determined that the loan request is technically justified and meets the requirements of an Energy Commission loan.

I appreciate your consideration of this item and I'm happy to answer any questions that you have.

COMMISSIONER DOUGLAS: Great, thank you. I mean it certainly looks like a really good loan and I'm really happy that the County of Santa Clara is participating in the program.

Other comments and questions?

COMMISSIONER MC ALLISTER: Just to reiterate what I said before about the ECCA Program, it really hits a sweet spot in what's needed and the local governments have had really positive, I think, experiences all around with it.

And to the extent we can keep it going and keep funding it and finding sources of capital, we should

absolutely do that. You know, this is a loan, it's not a grant, and it can live on for a long time, it has reflows associated with it.

So, I think it's a really great offering that the Commission -- that's relatively low cost to the State. It is a subsidized interest, but it is actually capital, it's a loan and will come back to us.

And the requirements around the kinds of things it's funded, of which is this a really, fairly typical example are great projects, with good cost effectiveness, and the capital is sort of in the right place at the right time to make it happen.

So, this project is no exception. I have a lot of faith in the vetting process at the Commission for what projects are worth funding and would strongly support this project.

Okay, so I'll move Number 14.

COMMISSIONER PETERMAN: I'll second.

COMMISSIONER DOUGLAS: All in favor?

(Ayes.)

COMMISSIONER DOUGLAS: Item 14 passes unanimously, thank you.

And moving on, now, to Item 15, the City of Napa, possible approval of Agreement 002-12-ECF for a loan of $1,907,136, at 3 percent interest to the City of Napa to

install 4,747 LED and induction streetlights.

Karen.

MS. PERRIN: Good afternoon Commissioners. I am Karen Perrin from the Special Projects Office.

And the City of Napa is seeking approval of a $1,907,136 loan to retrofit their city streetlights.

The original lighting along the city streets is metal halide and high-pressure sodium. And Napa has completed some pilot programs already of their streetlights, using the PG&E Turnkey Program.

Based on the success of the projects and the energy savings, the City would like to retrofit the entire City streetlights and replace them with energy efficient lamps.

The City will retrofit over 4,700 fixtures to energy efficient LED and induction lights.

The City expects to receive $260,000 in PG&E utility incentives.

The requested loan will save the City over $173,000 annually in utility costs.

And staff is seeking your approval.

COMMISSIONER DOUGLAS: Thank you. Questions or comments, Commissioners?

COMMISSIONER MC ALLISTER: Any, Commissioner Peterman? No?

COMMISSIONER PETERMAN: No. It's a really good project for all the reasons that you stated previously, Commissioner McAllister.

COMMISSIONER MC ALLISTER: So, lighting is a really interesting use of ECCA funds. I think there's a lot of -- it has a lot of -- lighting is just interesting all around, it's sort of like batteries, I guess.

But the local jurisdiction has to do a lot of work to make a street-lighting project work. The pilot projects, I think, have been really key to making sure there's public acceptance to testing out the new technologies.

Oftentimes, I don't know in this case, but I suspect that there has been a lot of work with the fairly highly developed and knowledgeable advocates around the dark sky issues, and folks who want to look up into the heavens because street lighting is an impediment, really, to them to make it work if it's not done right.

So, it's a really -- it's actually a fairly significant policy decision at the local government level to do this, particularly to do every single streetlight in a jurisdiction.

So, kudos to the City of Napa and to the sort of foresight they have to be able to do this.

The technologies that we have today are just

phenomenal and the quality of light, the advocacy, it's ripe for pretty much all streetlights to be retrofit. We know that they operate a lot of hours, you know, generally they're on all night, so the energy savings are there and they're very predictable.

So, again, ECCA's a great -- these projects are self-funding in a way, but the cities need the capital and so ECCA's a really great application for those funds.

So, I will go ahead and move Item 15.

COMMISSIONER PETERMAN: I'll second.

COMMISSIONER DOUGLAS: All in favor?

(Ayes.)

COMMISSIONER DOUGLAS: Item 15 passes unanimously.

Item 16, Pacific Gas & Electric Company; possible approval of Agreement PIR-11-004 for a grant of $1,000,000 to Pacific Gas & Electric Company to verify the performance of an advanced underground compressed air storage plant for providing ancillary services to the electric grid.

Johann.

MR. KARKHECK: Good afternoon Commissioners. My name is Johann Karkheck, I'm here with the Energy Systems Research Office, here seeking approval of Agreement PIR-11-004, with PG&E for $1,000,000.

This grant will provide cost share for a project

funded by the U.S. Department of Energy's ARRA program to conduct an underground compressive air energy storage demonstration.

The project is a three-phase project totaling $355 million. This grant provides cost share for the first phase of the project, which is $50 million.

Work performance in this first phase involves analyzing geologic data of depleted gas reservoirs and performing an engineering cost benefit analysis to select a suitable site in California.

The compressed air energy storage demonstration will determine the system's reliability, durability, and ability to provide ancillary services that aid in integrating variable renewable energy resources into the electric grid.

Staff would request approval of this agreement and I'd be happy to answer any questions.

COMMISSIONER DOUGLAS: Thank you. And Valerie Winn is here, from PG&E, to comment on this item. Come on forward.

MS. WINN: Hi, Valerie Winn with PG&E. I just wanted to say thank you to the Commission for their support of this project. And I know Johann has talked about a few of the steps coming up, I wanted to give you a little bit more information on where we are in this process.

Of course, right, we're looking at a few different sites that we would acquire to do tests for this project, and we're hoping to complete the acquisition of those sites by the end of this year.

And then we would be able to start drilling some samples so that we could analyze those samples for their geological properties to see if it makes sense to have a compressed air energy storage facility in these locations.

So that drilling would start by the end of the year, first quarter of next year, and we'd do that analysis.

And then based on the results of that analysis, we will be selecting the best site, then, to do air injection testing because we'll want to see, you know, how well does the air hold at these locations or at one -- the best location.

In mid-2014 we'd be expecting to have a request for offer to seek feedback from people who might be interested in building this compressed air energy facility. And based on the air injection test and the RFO results, we would be able to perform a cost benefit analysis at that time, as to whether we would be moving forward with the project.

So, but thank you again for the support, it's really exciting and we think it will be -- could be a

really good project for helping to integrate the higher levels of intermittent renewables on the system. Thank you.

COMMISSIONER DOUGLAS: Yeah, thank you. I mean, obviously, storage projects are going to be very important for us in terms of integrating renewables as we go forward, and it's nice to see this project leveraging Recovery Act money, as well.

So, I don't know if Commissioners, if you have any additional questions?

COMMISSIONER MC ALLISTER: I'm curious about the site, what kinds of sites you might be looking at, whether you're looking at, you know, particular sites next to -- I mean, obviously, it's got to be next to the grid and I'm wondering sort of urban, rural, or if you're sort of really looking at strategically on, you know, loadings throughout the distribution grid, or the transmission grid, or sort of things like that.

I don't know if you can speak to those technical issues.

MS. WINN: No, I really can't speak to those technical issues.

COMMISSIONER MC ALLISTER: Okay, yeah.

MS. WINN: But I'd be happy to get more information for you.

My recollection is they are really porous rock formations, old oil field sites that maybe we're evaluating to see if they're suitable for this. But I'm not certain as to the exact location of the three sites we're looking to acquire by year end.

COMMISSIONER MC ALLISTER: Okay, and just on sort of functionally, this predates me, I think, as far as the whole ARRA development and the selection -- or your selection in the ARRA process, but this presumably was a match that we committed to at the time PG&E applied; is that right?

MS. WINN: I believe that's correct.

COMMISSIONER MC ALLISTER: Okay, so we're just following through with our commitment here, really.

MS. WINN: Uh-hum.

COMMISSIONER MC ALLISTER: Yeah, great. Yeah, great project, storage is, you know, a high priority in the State so we need all comers that work.

COMMISSIONER DOUGLAS: So, is there a motion on Item 16?

COMMISSIONER MC ALLISTER: I'll move Item 16.

COMMISSIONER PETERMAN: I'll second.

COMMISSIONER DOUGLAS: All in favor?

(Ayes.)

COMMISSIONER DOUGLAS: Item 16 is approved.

MS. WINN: Thank you, again.

COMMISSIONER DOUGLAS: Thank you.

Item 17, Bay Area Air Quality Management District; possible approval of Contract 600-12-2002 for $3,000,000 with the Bay Area Air Quality Management District for the Bay Area e-Taxi Program.

Sarah.

MS. WILLIAMS: Good morning Commissioners, I'm Sarah Williams from the Emerging Fuels and Technologies Office.

I'm here to request approval of a contract for $3,000,000 in Alternative and Renewable Fuel and Vehicle Technology Program funding with the Bay Area Air Quality Management District.

This will fund part of a $25.75 million program. This programs includes funding from the San Francisco Municipal Transportation Agency, the City of San Jose, and the United States Department of Transportation.

The Bay Area Air Quality Management District plans to do a two-phase demonstration project to demonstrate zero emissions battery-electric taxis, with switchable batteries, along the corridor between the San Francisco International Airport and the San Jose International Airport.

The battery switch station automates the battery

change process so that the driver experience is similar to that of a car wash.

Our funding is for phase one, which will develop and deploy two battery switch stations and six battery-switchable electric taxis.

As a result of successful completion of phase one, phase two would demonstrate two additional battery switch stations and 55 additional battery-switchable taxis.

This program expects to create about 143 short-term jobs and 135 long-term jobs over three years.

These jobs include taxi operators, including taxi jobs created by the ability to generation zero emissions medallions.

I'm here to ask the Commission to support this project.

And Damien Breen, from the Bay Area Air Quality Management District would like to make a comment.

COMMISSIONER DOUGLAS: Thank you. Mr. Breen.

MR. BREEN: Thank you Commissioners. The $3 million project that you're considering today provides for those two battery switch stations and the six electric vehicles. We fully expect those vehicles to be manufactured here in California to provide additional jobs in the State.

And because of the nature of the technology we're

talking about, the battery switch stations and the vehicles, themselves, allow batteries to be switched in seconds. That means that these vehicles, similar to our gasoline internal combustion engines would essentially have an unlimited range.

We expect the project to be completed within the next two years, so along a very aggressive timeline, and we expect that to be a marque project for the electrification of fleets here in California.

Battery switch stations, obviously, like all of our other technology solutions, aren't the silver bullet. They're not the panacea for everything. But for fleets with stationery locations, such as taxi fleets, they provide a very interesting and very, I think, good technology that could reduce the emissions of those vehicles to zero.

The project that you have in front of you would become part of a 60-vehicle project that would deploy four stations throughout the system that would run between Northern and the Southern Bay Area.

And it leverages $18 million in private funding, along with $6.6 million in Federal and local funding coming from the Air District, our partners, the Metropolitan Transportation Commission, and the City of San Jose, Federal Government and, additionally, the San Francisco

Department of the Environment.

And the project, itself, is very innovative and we believe it supports the State's goals of air quality, greenhouse gas emissions reductions, your employment goals and your energy security goals.

And we're hoping that you look favorably on this request for funding today, and I'll be happy to answer any questions that I can.

COMMISSIONER DOUGLAS: Great. Well, thank you, thanks for being here.

So with that, questions or comments, Commissioners, on Item 17?

COMMISSIONER PETERMAN: I'll just make a comment that I think this project is another example of how we're trying to get electric cars into a wider and more diverse group of Californians.

And particularly, to the extent we can help our fleets convert is good.

And not all of us, we talked about earlier, can afford an electric car, but now we can afford to ride in one.

And this is the advantage, the taxi program will give a much wider array of folks exposure to electric vehicles.

And I look forward to seeing the results of the

project and the work that you're doing with the other companies involved, and I'm supportive of this initiative.

I'll also just note, particularly what's attractive about this project is this opportunity to leverage Federal funds, as well as private funds, and funds from local governments. And so I really applaud the diversity of stakeholders that are contributing funding to this project.

COMMISSIONER MC ALLISTER: Yeah, I would just sort of acknowledge the Bay Area AQMD for all of its innovation on the air quality front.

And it's hard to manage an out-of-compliance district, right, when you have that many people and that many cars, and packed into a relatively small area. And I think the AQMD has historically done a terrific job of engaging stakeholders and coming up with innovative programs to mitigate criteria pollutants and sort of take a -- in very specific and well-informed ways, but also taking a strategic global view, and this certainly fits in to that, that schema.

So, it's very exciting. I'm glad to see that model sort of also playing a role, because I think in a concentrated geographic area, like we have in the Bay Area, it seems like it's very appropriate, and so looking forward to sort of the monitoring and information that comes out of

it.

Would note that there is a small portion of the funding that's coming from ECCA, and wondering a little bit about sort of what the break up and reasoning behind that might be? Is there some usage difference that the 160 K from ECCA is going to cover?

MS. WILLIAMS: I can address that. That was actually just a typo on our part.

COMMISSIONER MC ALLISTER: Oh, okay.

MS. WILLIAMS: It is all Alternative Renewable Fuels and Vehicle Technology Funding.

COMMISSIONER MC ALLISTER: Oh, great, okay. I'm looking at the contract request form and the boxes that are checked. So, yeah, anyway, thanks, appreciate it.

MS. WILLIAMS: Well, thank you for your careful read of that and we'll make sure that's corrected.

COMMISSIONER MC ALLISTER: Yeah, exactly. So, yeah, we'll make sure that that's all good.

I guess, so all of it, all $3 million, then, is coming from the ARFVTF, right?

MS. WILLIAMS: Yes.

COMMISSIONER MC ALLISTER: Okay, great, perfect. Thanks very much.

COMMISSIONER DOUGLAS: Great. Well, good comments and good question, Commissioner McAllister.

I'll just note, and I think this has been said, but it certainly seems like a program with switchable batteries for taxis in the Bay Area has a lot of potential because of the concentrated geographic area, because there is a lot of taxi usage in the Bay Area.

And, obviously, being able to switch the batteries out quickly seems like a huge benefit for taxis.

So, you know, we'll be watching this program closely and we'll be looking for, you know, hoping to get good news out of it. It seems like a really good application.

So, with that do we have a motion on Item 17?

COMMISSIONER PETERMAN: I will move Item 17.

COMMISSIONER MC ALLISTER: I'll second.

COMMISSIONER DOUGLAS: All in favor?

(Ayes.)

COMMISSIONER DOUGLAS: So, Item 17 is approved unanimously, thank you.

Item 18, Minutes, possible approval of the September 12th, 2012 Business Meeting Minutes.

COMMISSIONER PETERMAN: I'll move Item 18.

COMMISSIONER MC ALLISTER: I'll second.

COMMISSIONER DOUGLAS: All in favor?

(Ayes.)

COMMISSIONER DOUGLAS: The Minutes are approved.

Item 19, Lead Commissioner or Presiding Member Reports. Go ahead.

COMMISSIONER MC ALLISTER: So, I just wanted to highlight the record, get on the record just the fact that we had workshops yesterday on AB 758, and the day before, Monday and Tuesday of this week.

I think it was a really huge step in the right direction. It was a big lift for staff. We had dozens of panelists over the two days, all of whom brought a high level of knowledge, and engagement, and commitment, and I think willingness to work with the process and with us going forward.

And it was a very informative, substantive, meaty set of topics about how we are going to get AB 758 implemented and, specifically, how we are going to increase the probability of getting, you know, most of our existing buildings upgraded, retrofitted for energy efficiency and other qualities over the next few years, over the next decade or so.

And it's a big lift. I think we all recognized that.

We have the experience of the ARRA programs that has been invaluable, I think, in framing where we're going, going forward.

But it remains something that we need to scale

several orders of magnitude to hit the goals that we have both -- well, just across the board in the various policy arenas in the State.

So, we have the long-term strategic plan, the energy efficiency strategic plan, our energy and carbon goals for residential and nonresidential. Existing buildings are really where the energy savings lie to get to those goals. I mean in lots of places, but that is one critical area that we have to address and learn how to get action in.

And the -- I was just very motivated. I came away from the couple days very energized and very optimistic about our ability to put together a workable plan and to engage the right people, to have stakeholders across the State from the agencies, certainly, but also from the industries helping craft a suite of policies that can work together with the PUC, particularly, but also with the Air Resources Board and get us kind of on the same page as far -- get us well coordinated within the constraints that each of those agencies have, but to put some policy recommendations out there that are workable and that have some consensus around them.

So, I was really, really highly encouraged by the two days and it was a really fascinating set of panels.

And I think there were a lot of people there on

the web, and in the room, pretty much packing the place the whole two days, and with a high level of engagement.

So, it was really good to see it in one of the first workshops that I've sort of, you know, run with. And, you know, I think staff did a really great job of putting them all together, and making sure that we kept on time, and making sure that everybody was heard at the same time, so very encouraging.

Going forward the action plan is the next step, so we're going to figure out the best ways to keep the panelists and other stakeholders engaged with working groups, and trying to juggle sort of a level of formality with the flexibility for engaging those working groups going forward.

An action plan in draft by the end of the year, some workshops around various parts of the State, and a final plan early next year that the Commission can then adopt, hopefully, by the end of the first quarter.

And very encouraging that the PUC was here both days and provided substantive comment all around. And I think we acknowledged both the opportunity and the challenge of the -- opportunity to engage and get it right, you know, across commission, but also some of the constraints that we have that exist in the PUC process regarding data and cost effectiveness that are real

constraints, and really need a lot of discussion to figure out how to engage with directly, work around, et cetera.

So, a big lift, but very positive step and I'm really excited to keep the sleeves rolled up and pushing that one forward.

So, it could be a big -- AB 758 could really have impact in the State for generations. I mean the existing buildings are going to be with us for a while, so if we can get in them it could really help the Commission and the State move towards its goals.

So, I wanted to let everybody know about that.

COMMISSIONER DOUGLAS: Well, thank you, Commissioner McAllister, that sounds -- that's a great report and it sounds like really good news. So, definitely, keep us in the loop on the progress on AB 758.

COMMISSIONER PETERMAN: Yeah, and congratulations on your first series of workshops.

COMMISSIONER MC ALLISTER: Thanks.

COMMISSIONER DOUGLAS: With many more to come.

COMMISSIONER MC ALLISTER: Yeah.

COMMISSIONER DOUGLAS: Speaking of workshops, I wanted to report very briefly that on September 24th we held the third in a series of workshops on the Desert Renewable Energy Conservation Plan. We had one on Energy Infrastructure Planning and the DRECP some months ago.

Another on durability of mitigation on public land in the DRECP, and this one was on governance costs and financing.

So, you know, another big topic that needed public dialogue and input and it was a really helpful workshop. So, I definitely, really appreciate the participation of a very wide range of expert stakeholders, including representatives from a number of other conservation plans in California.

Secondly, Commissioner Peterman and I attended and spoke at the Southern California Energy Summit in Palm Springs. So that was another really good forum, really good opportunity to both talk about the Energy Commission, some of the work that we're doing, and also connect with a lot of people doing very interesting work in just this wide variety of areas in Southern California and statewide.

The back of the room there was full of all kinds of alternative fuel and electric vehicles. Commissioner Peterman probably spent a little more time looking at them than I did, but I walked by and noticed a very wide and diverse range of vehicles in the back of the room there, so that was also very good to see.

So, with that I think our reports are done.

Let's go on to Chief Counsel's Report.

MR. LEVY: Good afternoon, I guess now, Commissioners. I don't have a report today, thank you.

COMMISSIONER DOUGLAS: Very good, thank you.

Executive Director's Report?

MR. OGLESBY: I'd like to mention a couple of things to advise the Commissioners and the public that the Energy Commission staff has been working closely with the Governor's Office, as well as our sister agency, Air Resources Board, to try and address the rapid rise in gasoline retail prices.

Late last week prices spiked to record levels at retail, resulting from two refineries being offline early in the week, Exxon Mobile, and Torrance had a complete shutdown due to a power outage of power provided by Southern California Edison.

And it took some time to get restarted. It takes a while to restart a refinery stage by stage.

Whereas Tesoro, in Martinez, has scheduled maintenance that brought the plant down and that plant should be up and operating now.

That, combined with Richmond refinery being down as a result of a fire in August, compounded the situation and led to marketplace conditions that drove the prices high.

In response and after consultations with the agencies involved, the Governor directed the Air Resources Board to relax the rules that relate to the formulation of

gasoline early, essentially switching to wintertime gas, which has a higher Reid vapor pressure a few weeks early.

The weather's been good and it seemed appropriate for the minimal environmental risk to allow a more generous Reid vapor pressure standard. And, fortunately, that has proven to be true so far as the weather goes.

That action essentially allows more blended components to go into the fuel, principally butane, and should increase the volume of the supply of gas into the marketplace.

The spot market responded immediately by a very rapid drop in wholesale prices. However, retail prices have been -- as typically happens, retail prices have been much slower to reflect a reduction.

They have peaked, they have begun to decline, but they haven't dropped like the whole prices have, which is quite dramatically.

So, the action should result in an acceleration of price reduction over what would have happened had the refineries come back online and slowly rebuilt the inventory. This allows more inventory sooner. It also provides a little more of a cushion should something else happen in the marketplace, because it should help rebuild the inventory.

But we're still monitoring constantly what's

going on in the marketplace and seeing how effective and how swiftly the market reacts to this action.

The second item I'd like to report on is an event that occurred last night, near Dana Point. The Nuclear Regulatory Commission had a public forum to provide the latest information on the San Onofre Nuclear Generating Stations.

It was not a decision making forum, it was a matter of sharing information and it was attended by hundreds, and a very intense and long meeting. Clearly, a local constituency would prefer the power plant stay shut, but it was also balanced by about half the room that represented the union workers who very much would like to see the plants opened right away.

The long and the short of the hearing was to describe the status and there was a great deal of interest because the week before Southern California Edison had indicated their request to the NRC to restart one of the two units, albeit at 70 percent power, run it for five months, take it off, check out the status of the steam generators.

That clearly added interest and intensity to the meeting. So, there were no decisions made at the meeting, it was a community meeting to share information and I attended and served on the panel.

The questions that came to me more related to our role in the process, the Energy Commission's role, which is related to grid reliability and how hard we've been working to work with our sister agencies to make sure that in the absence of these two large generation stations we are able to provide electrical services to the San Diego and the Southern Los Angeles Basin.

COMMISSIONER DOUGLAS: Great. Well, thank you, thanks for that report.

Let's see, now, Public Advisor's Report?

MS. JENNINGS: I have nothing to report, thank you.

COMMISSIONER DOUGLAS: Thank you.

Public comment?

I don't see any public comment so with that, thank you everybody, we're adjourned.

(Whereupon, at 12:43 p.m., the business meeting was adjourned.)

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