

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, NOVEMBER 3, 2010

10:00 A.M.

Reported by:
Peter Petty

Commissioners Present

Karen Douglas, Chair
Jeffrey D. Byron
Anthony Eggert
Robert Weisenmiller

Staff Present:

Melissa Jones, Executive Director
Michael Levy, Chief Counsel
Jennifer Jennings, Public Advisor

	<u>Item No.</u>
Miles Roberts	2, 3
Kristen Driskell	2, 3, 4, 5, 6 7, 8, 9
Aleecia Macias	4
Ysbrand van der Werf	5
Joanne Vinton	6
Gary Yowell	7
Jim McKinney	8
Donald Coe	9
Richard Sapudar	10
Matt Coldwell	11
Mike Gravely	11

Also Present

Interested Parties

Mike Rosenzweig, Mission Motor Co.	3
Michael Simon, TransPower	4
Donald Gray, PhD, PE, EBMUD	6
Brian Pellens, Great Valley Energy	8

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P R O C E E D I N G S

NOVEMBER 3, 2010 10:05 a.m.

CHAIRPERSON DOUGLAS: Good morning. Welcome to the California Energy Commission Business Meeting of November 3rd, 2010.

Please join me in the Pledge.
(Whereupon, the Pledge of Allegiance was received in unison.)

CHAIRPERSON DOUGLAS: Item 1. Consent Calendar.

VICE CHAIR BOYD: Move approval.

COMMISSIONER EGGERT: Second.

CHAIRMAN DOUGLAS: All in favor?

(Ayes.)
Consent Calendar is approved.

Item 2. Leyden Energy, Inc. Possible approval of Contract ARV-10-015 for a grant of \$2,962,743 to Leyden Energy, Inc., to develop and test a new lithium ion battery technology and verify production and assembly processes. Mr. Miles - Mr. Roberts.

MR. ROBERTS: Good morning, Chairman Douglas and Commissioners. I'm presenting for your approval a project titled "Predevelopment and Development of Infrastructure Necessary to Establish a California-Based Manufacturing Facility for Advanced Lithium Ion Batteries

1 for Electric Drive Vehicles." This was proposed for
2 award under PON 09-605 for manufacturing plants. Leyden
3 Energy is a Research Development and Manufacturing
4 Company based in Alameda County. They want to establish
5 a facility in Fremont to develop and test a new advanced
6 Lithium Ion battery technology and design and verify a
7 pilot production line that will be capable of producing
8 10 electric vehicle batteries each month, by the end of
9 the project. By funding Leyden's project, the Energy
10 Commission is investing in California's nascent clean
11 tech industry and encouraging the development of a
12 network of California-based vehicle technology and
13 component manufacturers that should prove to be well
14 positioned for growth. Eleven technical and production
15 jobs will be created directly by the project and Leyden
16 projects that 500 more will be created between a future
17 commercial production line and the resulting expansion of
18 the company's Fremont, California Technical Center.
19 Assuming use in a light-duty passenger vehicle, each
20 battery pack sold will be responsible for GHG emission
21 reductions of 72 percent and petroleum use reductions of
22 575 gallons per year.

23 The Energy Commission is providing \$2,963,000
24 in Alternative and Renewable Fuel and Vehicle
25 Transportation Program funds and the project team will

1 supply an equal match.

2 CHAIRMAN DOUGLAS: Thank you. Questions or
3 comments, Commissioners?

4 MS. DRISKELL: Madam Chair, if I may?

5 CHAIRMAN DOUGLAS: Of course, please go ahead.

6 MS. DRISKELL: As you know, the Energy
7 Commission's Chief Counsel's Office reviews all proposed
8 awards under AB 118 to identify whether review and
9 analysis under the California Environmental Quality Act
10 is necessary. Based on my review of this project and
11 further due diligence, I recommend that the Commission,
12 if it approves this award, include a finding that this
13 project is categorically exempt from further
14 environmental review under CEQA Guideline Section 15301
15 for existing facilities.

16 CHAIRMAN DOUGLAS: Thank you. We will, of
17 course, take your recommendation. And now,
18 Commissioners, any questions or comments on this item?

19 COMMISSIONER EGGERT: Maybe just a quick
20 comment, Madam Chair. The focus of this investment is
21 specifically for sort of predevelopment for manufacturing
22 capacity for Lithium Batteries, which we believe are
23 going to be one of the leading chemistries for especially
24 electric vehicles, and I noticed that this company
25 actually has a partnership with another company, Green

1 Vehicles, which we've provided some assistance to, as
2 well. I also note they're named after - I believe
3 they're named after the Leyden Jar, which is one of the
4 original battery capacitors invented in 1744 by a Dutch
5 scientist, and I don't know if you know anything about
6 that history, is that actually where the name came from?

7 MR. ROBERTS: I can't speak to that, no.

8 COMMISSIONER EGGERT: Okay -

9 COMMISSIONER BYRON: Commissioner, did you look
10 that up? Or did you just pull it out of your mind there?

11 COMMISSIONER EGGERT: I knew the name sounded
12 familiar, but, yeah, the wonders of Wikipedia and Google
13 came in very helpful here. I guess in terms of, if this
14 predevelopment activity is successful, do we know when
15 they would actually be able to scale up their
16 manufacturing capabilities? Is that -

17 MR. ROBERTS: They'll be ready for commercial
18 scale-up by May 2013 according to the schedule they
19 submitted with the application.

20 COMMISSIONER EGGERT: And then, I guess the
21 question is, do we anticipate sort of tracking the
22 recipients of these grants to determine whether or not
23 they are successful in eventually meeting those goals?

24 MR. ROBERTS: Absolutely. We'll be tracking
25 the projects and there's a six-month data collection

1 planned after the end of the last technical task for the
2 project.

3 COMMISSIONER EGGERT: Okay, thank you. I think
4 that'll be important, to be able to look back in terms of
5 some of the recipients and whether or not they were
6 actually successful in their mission to be able to build
7 up capacity in the State. So, I have no further
8 questions. So I'd like to move the item.

9 COMMISSIONER BYRON: Second.

10 CHAIRMAN DOUGLAS: All in favor?

11 (Ayes.)

12 The item is approved.

13 Item 3. Mission Motor Company. Possible
14 approval of Agreement ARV-10-021, for a grant of \$505,381
15 to Mission Motor Company, to perform product validation
16 testing and assembly process refinement of their battery
17 and motor control technologies for electric vehicles.
18 Mr. Roberts.

19 MR. ROBERTS: Thank you. I am presenting for
20 your approval the project titled "Electric Vehicle
21 Component Commercialization through Product Validation
22 and Process Improvement," which was proposed for award
23 under PON-09-605 for Manufacturing Plants. Mission
24 Motors is a high performance electric motorcycle and
25 electric power train technology company, based in San

1 Francisco. They will use this grant to advance their
2 battery module and motor control systems from the working
3 prototype phase to a final product ready for commercial
4 production. The assembly lines that will be designed and
5 validated through the course of this project will be
6 capable of producing 30,000 battery packs and motor
7 control systems per year by 2015. Completion of this
8 project will result in a new electric vehicle component
9 manufacturing facility in San Francisco, in addition to
10 the creation of four permanent manufacturing jobs. As the
11 business grows, Mission Motor's analysis predicts that
12 they can add as many as 100 green collar manufacturing
13 and assembly jobs to California by 2015, and will have
14 58,000 power trains operating in California and 500,000
15 worldwide by 2020. As a company, Mission Motors
16 maintains a commitment to sustainability and operations,
17 full cycle sustainability, product design and
18 manufacturing, and social sustainability in the
19 relationship between the company, employees, and the
20 local community. Examples of this commitment include
21 designing products that they can be returned and reused
22 at the end of their useful life, and locating the
23 research engineering and assembly facility in downtown
24 San Francisco so that the employees can walk or bike to
25 work. AB 118 grant funding will help Mission bridge the

1 gap between prototypes and tested products, and it will
2 quickly put them in a position to fill production orders
3 that are already coming in, and it will allow the small
4 company to gain market share at a time when the electric
5 vehicle component marketplace is rapidly developing and
6 increasing in size. The Energy Commission is providing
7 \$505,381 in Alternative and Renewable Fuel and Vehicle
8 Transportation Program funds, and the project team will
9 provide match funding of \$623,581.

10 MS. DRISKELL: Based on my review of this
11 project and further due diligence, I recommend that the
12 Commission, if it approves the award, include a finding
13 that the project is categorically exempt from further
14 environmental review under CEQA Guideline Section 15301
15 for existing facilities.

16 CHAIRMAN DOUGLAS: Thank you. And I have a
17 blue card from Mike Rosenzweig, Operations Manager. Are
18 you here? Could you come forward, please?

19 MR. ROSENZWEIG: Madam Chair, Miles, thank you
20 for the time, I appreciate it. I'm sorry, our V.P. of
21 Operations actually wanted to be here and speak in front
22 of you, he's the Program Manager on the project, he
23 couldn't make it, he's in the middle of getting one of
24 our projects out the door. If you actually Google
25 Mission Motors today, we had some very exciting news

1 yesterday come out about unveiling basically the business
2 that we're able to do as part of this grant, which is,
3 for the people who don't know, Mission Motors is an
4 Electric Vehicle and Power Train technology company. Up
5 until basically yesterday, the company publicly was a
6 motorcycle company, until yesterday; now, we are a
7 motorcycle and power train company. We now have publicly
8 unveiled the fact that we are selling our components,
9 exactly what Miles was talking about for us working
10 towards producing these batteries, motors, and
11 controllers. This is really important because it allows
12 us to expand beyond just motorcycles to hybrids, buses,
13 trucks, vans, public utility vehicles. It really opens
14 up the door as to what we can do and what we can provide
15 as a company. We are very excited by that, we think that
16 this project is really going to help us do exactly what
17 we were hoping to do. We are passionate about taking
18 petroleum-based vehicles off the road and replacing them
19 with electric vehicles, partial and full electric
20 vehicles. We are also very excited because this project,
21 this is our first grant that we've applied for and
22 received, it's California specific, which we're excited
23 about, being in California and staying in San Francisco,
24 in particular, is very important to us, staying local
25 will be a main goal of ours as we move into production.

1 And so that production, as Miles said, will happen
2 largely due to this project. So, thank you very much.

3 COMMISSIONER BYRON: Mr. Rosenzweig, if you
4 wouldn't mind. Very much appreciate your being here
5 today. These funds are an exciting part of the work
6 we've been doing here at the Energy Commission for the
7 last couple of years. All Commissioners don't necessary
8 see this until it comes to a business meeting, so these
9 recommendations come to us, and I was just thrilled to
10 read all these new companies that are benefitting from
11 these funds. But we don't necessarily get a sense,
12 except because you're here now, how important these funds
13 are to your business future. Can you give us a sense, as
14 much as you're willing to, about how crucial these funds
15 were in order for your business to grow?

16 MR. ROSENZWEIG: Right, well, the first thing I
17 thought of is the reaction that we had when we heard that
18 we actually received the award. I think we all took off
19 at 4:30, once we opened up the e-mail, and we were
20 jumping up and down, it was exciting. What it does for
21 the business, in particular, is it gives us the chance to
22 accelerate what we already want to do, but have a hard
23 time doing largely because of the difficulty in raising
24 money in a business that is so capital intensive. I
25 think, if you look at the companies that are being

1 invested in, in the private sector, private equity,
2 venture capital, largely it's lower capital intensive
3 businesses - Web businesses, websites, those kinds of
4 thing, Facebooks of the world. For companies like us
5 that are building actual products and building them in
6 the United States, certain investors get anxious about
7 what is required to do that and build those businesses,
8 and it's something that we've struggled with up until
9 very recently, and I think just recently we've gotten
10 really good traction with our private investment side.
11 But what this does is it allows us to build the business
12 at the rate that we need to in a private company, in a
13 venture backed company, and do so in a way that is
14 aligned with what we want to be doing in the first place,
15 so accelerating our pre-development towards
16 manufacturing, exactly what AB 118 and 605 was for,
17 that's exactly what we're here to do, and that's exactly
18 what the grant seems to help us do, and so, for us, it's
19 perfectly aligned.

20 COMMISSIONER BYRON: And do you know yet where
21 you'll be doing your manufacturing?

22 MR. ROSENZWEIG: San Francisco. Primarily San
23 Francisco. We will be doing early - we're planning to be
24 basically right in SOMA. And the hope - my hope and the
25 hope of a large part of our company is to stay in San

1 Francisco, if not the Bay Area, in particular,
2 manufacturing, for sure.

3 COMMISSIONER BYRON: Good, that's very
4 important. Thank you.

5 COMMISSIONER EGGERT: Again, I want to thank
6 you for coming and speaking to us and, in particular, I
7 think your business model of developing some of your
8 supply-based products, to be able to supply to other
9 companies, do you have any other potential customers kind
10 of ready to sign up to be -

11 MR. ROSENZWEIG: I'm not sure - I don't believe
12 we mentioned it in the grant, and I'm not at liberty to
13 discuss actual names, but we have two major automotive
14 manufacturers that we're currently working with, one of
15 them I definitely can't say, the other one, there may or
16 may not be news coming out very shortly as to who that
17 might be. That one would be a hybrid technology, the
18 other one is a PIER electric vehicle technology. They're
19 names you would know, they're three top five automotive
20 manufacturers. So, it's exciting for us and it's
21 exciting for California, in particular, and the industry
22 in general.

23 COMMISSIONER EGGERT: And I think this may have
24 been mentioned in the introduction, but what's your
25 current employee base and what do you anticipate to have

1 when you ramp up?

2 MR. ROSENZWEIG: Right now, we're just under
3 25, which is exciting because I think we were 11 in
4 December. And we will probably be double that, I would
5 hope, by this time next year. And then I think, Miles,
6 what was the number in there?

7 MR. ROBERTS: A projection of 100 by 2015.

8 MR. ROSENZWEIG: Yeah, completely doable,
9 especially as we move to manufacturing. Right now, we're
10 purely engineers and design types, but as we move towards
11 manufacturing, we'll have a whole scale of different
12 workers.

13 COMMISSIONER EGGERT: That's excellent news.
14 So, I don't have any further questions, but I do think
15 this, again, is another exciting example of how
16 California is helping to facilitate and seeding some of
17 these exciting new ventures, and I think somebody has
18 even mentioned that we're slowly becoming the Detroit of
19 the Clean Vehicle world, although I suspect we will
20 hopefully have a better future in terms of our ability to
21 sustain that. So, I guess I will move the item.

22 COMMISSIONER BYRON: Second.

23 CHAIRMAN DOUGLAS: All in favor?

24 (Ayes.)

25 The item is approved.

1 MR. ROSENZWEIG: Thank you very much. I
2 appreciate it.

3 CHAIRMAN DOUGLAS: Thank you, it's really
4 exciting for us to see manufacturing in clean
5 technologies taking root in California.

6 MS. JONES: Madam Chairman, we did some
7 housekeeping, we think we have the volume of the
8 microphones so there won't be as much crackling, but
9 these are new very sensitive microphones, so you need to
10 be a little farther away from them. Thank you.

11 CHAIRMAN DOUGLAS: Item 4. TransPower.
12 Possible approval of Agreement ARV-10-020, for a grant of
13 \$1 million to TransPower, to conduct technical and
14 economic feasibility studies and performance tests for a
15 vertically-integrated electric truck manufacturing
16 facility in Southern California. Ms. Macias.

17 MS. MACIAS: Good morning, Chairman Douglas and
18 Commissioners. My name is Aleecia Macias, and I'm
19 presenting for your approval today the TransPower
20 vertically-integrated facility for electric truck
21 manufacturing project. This project was proposed under
22 our manufacturing plant solicitation, PON-09-605. And
23 this project is essentially a study and validation of the
24 manufacturing project concept for large Class A electric
25 trucks in Southern California. And TransPower is

1 proposing a solution to co-locate the four key companies
2 in electric truck supply chain, and that would involve
3 three stages of electric truck manufacturing. Those
4 stages are component manufacturing, integration of
5 components into electric drive system kits, and then
6 component kit installation into mass produced Class A
7 truck models. So, TransPower is looking to the port
8 drayage market, specifically, and they're working with
9 Port TechLA to identify a location in the San Pedro Ports
10 Region. If this technology is successfully
11 commercialized, they are looking at production of 25
12 vehicles in 2013 and a ramp-up schedule that would get
13 them to 2,500 vehicles per year in 2020, and at an
14 estimated 75 tons per year per vehicle at that ramp-up
15 schedule, this project has the potential to eventually
16 result in over 1.5 million tons of greenhouse gas
17 reductions by 2020. Successful commercialization is also
18 estimated to result in approximately 1,500 new jobs by
19 2020. And with the completion of this project,
20 TransPower is hoping to begin construction of the
21 facility one month after completion, which is estimated
22 around January 2013.

23 TransPower is matching our one million dollar
24 grant with 50 percent cost share, one million dollars.
25 And some of their project partners include EPC, Evaira,

1 ISE, Navistar, and Port TechLA. Many of these partners
2 are California-based companies, so the co-location of all
3 these companies will reduce transportation shipping costs
4 of component parts and also create a lot of economic
5 development, both direct and indirect, with the
6 partnering companies. So, if you don't have any
7 questions, or I'd be happy to respond to any questions at
8 this point.

9 CHAIRMAN DOUGLAS: Thank you. Can we hear from
10 counsel?

11 MS. DRISKELL: Based on my review of this
12 project and further due diligence, I recommend that the
13 Commission, if it approves this award, include a finding
14 that the project is categorically exempt from further
15 environmental review under CEQA Guideline Section 15306
16 for information collection and statutorily exempt
17 pursuant to CEQA Guideline Section 15262 for feasibility
18 and planning studies.

19 CHAIRMAN DOUGLAS: Thank you. And we have here
20 Michael Simon, President and CEO of TransPower.

21 MR. SIMON: Good morning, Chairman Douglas and
22 members of the Commission. I don't want to take up a lot
23 of your time, but I wanted to make the trip from San
24 Diego County to personally relate to you how the Energy
25 Commission's AB 118 grant will improve lives in our

1 community. The AB 118 grant program, as a prior
2 discussion indicated, fulfills a vital niche by providing
3 seed financing to early stage companies like TransPower,
4 that have not yet progressed to the stage where we can
5 secure venture capital or generate revenues from sales of
6 finished products, and that's a particularly acute need
7 for companies, as was mentioned earlier, that are very
8 capital intensive. Your grant has already enabled us to
9 secure a tentative commitment of financing from another
10 agency, which we expect to be finalized next month. This
11 vital seed funding will provide immediate employment for
12 10 highly talented engineers, scientists, and other
13 professionals, who are eager to develop a new solution to
14 the high levels of toxic emissions and fuel consumed by
15 Class 8 trucks, trucks weighing over 33,000 pounds. By
16 the end of next year, our team expects to have a
17 completely zero emission battery electric Class A truck
18 operating at Ports of Los Angeles and Long Beach, an area
19 known as the Diesel Death Zone, for the high levels of
20 pollution and associated health risks created by the
21 10,000 diesel trucks that visit ports on any given day.
22 Once this first truck is successfully demonstrated, we
23 expect port truck owners and operators to carry most of
24 the cost of replacing their diesel trucks with these
25 clean electric vehicles. As this occurs, TransPower will

1 employ hundreds of dedicated clean tech professionals
2 here in California. Equally, if not more important,
3 we'll be helping to prevent hundreds of premature deaths
4 and many more illnesses by ushering in this important new
5 technology. And as further evidence of the importance of
6 this technology, you just heard about lithium batteries,
7 which we are planning on using in these trucks, and drive
8 systems, and we might conceivably even become a customer
9 for the two companies that just preceded me. So, this
10 all fits together, it's wonderful synergy. At the same
11 time, working as a team, we will all reduce our
12 dependence on foreign oil, a benefit with national, if
13 not global ramifications. And all of this begins with
14 your AB 118 grant. Again, I can't thank you enough for
15 this support. We were jumping up and down also when we
16 got the news of this award. And TransPower looks forward
17 to a long and fruitful partnership with the Energy
18 Commission as we work together to achieve the vision that
19 we've mutually embraced.

20 COMMISSIONER EGGERT: Thank you very much. Is
21 it Mr. Simon?

22 MR. SIMON: Yeah, or Mike.

23 COMMISSIONER EGGERT: Mr. Simon, again, really
24 appreciates your participating in today's meeting and I
25 thought your articulation of the potential benefits from

1 this grant were extremely well put. This is actually
2 kind of a curiosity in terms of the market that you see
3 for this technology within the Class 8 sector. I noticed
4 that drayage trucks were going to be - is that going to
5 be the first application is drayage?

6 MR. SIMON: Yes. Our first target market is
7 drayage trucks. I've been working with the Port of LA
8 and Long Beach for about three or four years to evaluate
9 different zero emission solutions, including things as
10 far out as magnetic levitation trains and so on, and I
11 think there's a mutual agreement that the electric trucks
12 give the ports the greatest near term bang for the buck,
13 they completely eliminate emissions, battery technologies
14 that have advanced so rapidly over the last couple of
15 years, a lithium battery pack for a truck of this class,
16 just as recently as two years ago, would have cost over a
17 million dollars, and now we're looking at, over the next
18 couple of years, that cost coming down by a factor of 10.
19 And that's what basically is the forcing function that
20 allows these trucks to become cost-effective and compete
21 with diesel trucks in terms of dollars per year and
22 eventually cover the investment. So, we see this as a
23 very economically viable solution for a port truck
24 operator. Eventually, we see other markets embracing
25 this, like refuse collection trucks, they also, like work

1 trucks, get very low fuel economy, they create huge
2 amounts of emissions, huge amounts of noise in heavily
3 populated areas, and we can electrify those, they'll be
4 quieter, you won't be woken up in the morning by these
5 garbage trucks, along with the emissions reductions, and
6 then eventually delivery trucks. It will be a while, if
7 ever, before long haul trucks embrace this technology
8 because of the limitations on battery range, but about 20
9 percent of the Class A trucks on the road are locally
10 driven trucks, and that's many tens of thousands of these
11 vehicles, and they can all use this kind of battery
12 technology.

13 COMMISSIONER EGGERT: That's excellent. Yeah,
14 I think your target market seems to be spot on, and
15 particularly where there's a lot of - when the trucks
16 have a lot of time sitting around, you know, where they
17 would normally be idling with a diesel engine, seems to
18 be one of the biggest potential advantages of this
19 particular technology. Then, in terms of - you can
20 answer this question if you choose, but when do you think
21 would be the earliest you would be sort of economically
22 profitable, or your company would have enough sales to
23 sort of sustain its -

24 MR. SIMON: Sure. Our projections show turning
25 profitable within three to four years, and that's based

1 on a fairly conservative ramp-up of production. I've
2 learned from past experience that these heavy-duty
3 vehicles endure a lot of abuse, and there's a lot of bugs
4 that have to be worked out of the initial vehicles before
5 you can really start advertising them as mass producible
6 driving systems, or mass producible trucks. So, these
7 first trucks that we put on the road next year and the
8 year after will require a year or two of demonstration
9 and debugging with a slow ramp-up of production starting
10 in 2013, and hopefully break even to slightly profitable
11 by 2014, and becoming highly profitable by 2015.

12 COMMISSIONER EGGERT: And then, actually, I
13 remembered my other question, which is infrastructure for
14 providing the charging for these vehicles. Do you have a
15 plan for that or -

16 MR. SIMON: I'm glad you asked that question.
17 The traditional method of doing this is to have a
18 separate charging unit that either is an off-board
19 charger at the truck depot that the vehicle plugs into.
20 As you're probably aware, the electric cars like Nissan
21 Leaf all require a separate charger to be put in your
22 garage. We're going to rely on these types of off-board
23 chargers initially for the first few trucks we build, but
24 one of the technologies that your grant is going to help
25 us develop is a new type of power control unit, the power

1 converter, using silicon carbide technology. And because
2 of the ability of these types of chargers to handle high
3 currents and high power levels in a smaller package, we
4 have the potential to actually use this as our charger in
5 an on-board mode, so basically, if we're successful in
6 the silicon carbide converter development, it will
7 eliminate the need for a separate charging unit and the
8 inverter that needs to be used to operate the drive motor
9 on the vehicle will serve double duty as the charger, and
10 that will actually simplify the logistics of charging, it
11 will reduce the amount of infrastructure a truck operator
12 needs to have at their truck depot, and it will reduce
13 the total cost of the infrastructure, as well. I hope
14 that wasn't too technical, but -

15 COMMISSIONER EGGERT: No, that was very good.
16 I have no further questions. I would move the item
17 unless there's other questions.

18 COMMISSIONER BYRON: I'd like to add just one
19 comment. Mr. Simon, again, thank you for coming. You
20 know, I'm sitting down, I'm writing down many of the
21 things you're saying, and you're answering all of my
22 questions, but how can we thank you enough for bringing
23 us a company that does exactly what our policies and our
24 laws and regulations are asking for? You know, it's not
25 just oil independence, we are impacting human health by

1 what we're doing and moving goods around, we've set
2 policies in motion in the State, and you're bringing
3 exactly the kind of company that will help address these
4 issues and provide jobs. So, I'm very pleased, again,
5 our Legislature coming through with these funds so that
6 we can help companies like yours grow and get started. I
7 appreciate your being here today. I'm sorry, Ms. Jones,
8 I'll back off from the microphone now. So, thank you. I
9 will second the item.

10 CHAIRMAN DOUGLAS: All in favor?

11 (Ayes.)

12 The item is approved. Thank you.

13 MR. SIMON: Thank you.

14 CHAIRMAN DOUGLAS: Item 5. City Of San Jose.

15 Possible approval of Agreement ARV-10-016, for a grant of
16 \$1.9 million to the City of San Jose, to conduct
17 feasibility studies and develop a demonstration facility
18 for a gasification technology that will convert urban
19 wood waste and biosolids into biomethane for use as a
20 transportation fuel. Mr. van der Werf.

21 MR. VAN DER WERF: Good morning, Chairman
22 Douglas and Commissioners. I am Ysbrand van der Werf and
23 I'm presenting for your approval a grant agreement with
24 the City of San Jose, which was proposed for award under
25 PON 09-604, for Biofuel Production. This is a two-phased

1 project by the City of San Jose and their partners to
2 demonstrate an innovative gasification technology for
3 producing biomethane. In the first phase, they will
4 conduct a feasibility study at the San Jose Santa Clara
5 Water Pollution Control Plant. In the second phase, they
6 will construct a demonstration facility and operate it
7 using a variety of feedstocks, in particular, urban wood
8 waste and yard waste, and also biosolids from the waste
9 water treatment plant. This project could potentially
10 produce the equivalent of 150,000 gallons of diesel
11 annually. It will be an operation for two years as a
12 demonstration unit. The Energy Commission has awarded a
13 \$1.9 million grant and the City of San Jose and their
14 partners are providing \$4.2 million in match funding.
15 Fifteen construction jobs will be created with this
16 project and the number of long term jobs will be
17 determined as part of the feasibility study.

18 CHAIRMAN DOUGLAS: Counsel?

19 MS. DRISKELL: Based on my review of this
20 project and further due diligence, I recommend that the
21 Commission, if it approves this award, include a finding
22 that the project is categorically exempt from further
23 environmental review under CEQA Guideline Sections 15301
24 for existing facilities, 15303 for new construction of
25 small structures, and 15304 for minor alterations to

1 land.

2 CHAIRMAN DOUGLAS: Thank you. Questions or
3 comments, Commissioners?

4 COMMISSIONER BYRON: No real question, but a
5 comment. Commissioners, I think this is a case of also
6 where good leadership does matter. You know, I've been
7 down to San Jose a number of times and Mayor Reed has
8 clearly provided direction for his city with regard to
9 these opportunities. I'm not surprised to see that San
10 Jose is a recipient of these funds, although I'm not
11 terribly familiar with the project except what I've
12 reviewed here in the meeting binder, I'd just like to
13 give some credit to the City of San Jose for their coming
14 through with these kinds of proposals. He's made it very
15 clear, he wants the clean tech industry in his city, he
16 wants the jobs that it brings. So, I'm glad to see that
17 we're able to help them in that regard.

18 COMMISSIONER EGGERT: Just to build upon that a
19 little bit, Commissioner, this project and the next
20 several, it's unfortunate our fellow Commissioner Boyd
21 isn't here because I think these are definitely a product
22 of his leadership, as well, within the Commission, and
23 putting a focus on trying to find the best ways to use
24 biomass within the state, and particularly waste biomass,
25 of which we have a substantial amount, a lot of which

1 doesn't get put to good use currently, but certainly has
2 the potential to be a contributor to our energy and
3 environmental goals. I would also note here that the
4 city is a pretty substantial partner in this project,
5 they are providing \$4.2 million, or at least the partners
6 are providing \$4.2 million, more than twice what we're
7 putting in, so clearly they see some substantial
8 benefits. So, I'd like to move the item.

9 COMMISSIONER BYRON: Did we hear from Ms.
10 Driskell on this one yet? Good. I second the item.

11 CHAIRMAN DOUGLAS: All in favor?

12 (Ayes.)

13 The item is approved. Thank you.

14 Item 6. East Bay Municipal Utility District.
15 Possible approval of Agreement ARV 10-022, for a grant of
16 \$1 million to the East Bay Municipal Utility District, to
17 develop and test a process that converts fats, oil, and
18 grease into biodiesel feedstock at an existing wastewater
19 treatment facility. Ms. Vinton.

20 MS. VINTON: Good morning, Commissioners. I'm
21 Joanne Vinton. East Bay Municipal Utility District's
22 project is a proposal from 09-604 Biofuel Production
23 Plants. What they plan to do is construct a receiving
24 facility for fats, oil and grease, also known as FOG.
25 They're going to test ways to cost-effectively remove

1 brown grease from the FOG, they're going to test ways to
2 remove sulfur from the brown grease, and they want to
3 make a plan to build a full scale facility. They are
4 asking for a grant of \$1 million, the match is \$1.575
5 million. The FOG receiving facility will be built by
6 contractor proven construction. The benefits of this
7 project is that it will divert FOG to be used as fuel in
8 a full scale facility. They plan to produce 300,000
9 gallons of biodiesel, which would fuel all of their
10 trucks and possibly produce more that they could sell.
11 The reduction in greenhouse gas emissions would be 88
12 percent.

13 MS. DRISKELL: The East Bay Municipal Utility
14 District is the lead agency on this project and has
15 conducted a CEQA environmental analysis. East Bay
16 Municipal Utility District adopted an Addendum to their
17 Negative Declaration for the FOG receiving facility to
18 add the biodiesel study on September 27th, 2010, and found
19 that the project, when including specific mandatory
20 control measures, would not have any significant effect
21 on the environment. Based on my review of this project,
22 the Negative Declaration and Addendum, and further due
23 diligence, I recommend that the Commission, if it
24 approves this award, adopt an independent finding that
25 this project could present potentially significant

1 effects to air quality, greenhouse gas emissions, hazards
2 and hazardous waste materials, noise, and utilities and
3 service systems, but that the control measures
4 incorporated into this project will reduce any
5 significant impacts to less than significant levels, and
6 that such measures are within the jurisdiction of and
7 have been adopted by the East Bay Municipal Utility
8 District.

9 CHAIRMAN DOUGLAS: Thank you. Now, we have
10 Donald Gray here from the East Bay Municipal Utility
11 District. If you could come forward, please?

12 MR. GRAY: Good morning. I would like to
13 express our appreciation for considering the East Bay
14 Municipal Utility District for this opportunity to
15 explore more cost-effective measures or alternatives for
16 converted waste greases into high grade biofuel. The
17 East Bay Municipal Utility District has been a leader in
18 demonstrating the practicality of producing biodiesel
19 from waste greases and used this biodiesel that we
20 produced to run our diesel dump trucks about four years
21 ago. Going back further, in 2002, East Bay Municipal
22 Utility District received a California Energy Commission
23 grant under the Commission's Peak Load Reduction Program
24 for wastewater facilities to take post-consumer food
25 waste from restaurants, grocery stores, and other food

1 handling facilities, and anaerobically digest it to
2 produce methane gas, and then electricity by burning the
3 methane in internal combustion engine-driven generators.
4 In 2004, we became the first wastewater treatment plant
5 in the country, and as far as I know in the world, to do
6 that. Now, there is a tremendous interest in our food
7 waste work, and there are many wastewater treatment
8 plants that are interested in anaerobically digesting
9 post-consumer food waste to produce renewable energy. We
10 expect that this project that is being considered by you
11 today will be at least as successful, opening the door to
12 many future cost-effective biodiesel production
13 facilities to be built and operated so that the amount of
14 waste going to landfills can be significantly reduced and
15 the amount of renewable energy available in California
16 and elsewhere can be substantially increased. Thanks.

17 CHAIRMAN DOUGLAS: Thank you for being here.
18 Let me see if the Commissioners have questions.

19 COMMISSIONER BYRON: I have to comment, Mr.
20 Gray, thank you for being here. Obviously, the
21 demonstrated leadership of the East Bay Municipal
22 Utilities District in this area is just outstanding. I
23 also note that the district has also effectively involved
24 its legislators in certainly promoting the value of the
25 technologies that you're demonstrating here. I'm very

1 pleased to be able to support this project and, you know,
2 I really don't like turning phrases into -- acronyms into
3 words, but in this case, I like the acronym FOG. This is
4 a very difficult product to deal with and I'm really glad
5 to see that you're utilizing the heat content of these
6 waste products effectively like this. So, thank you for
7 being here.

8 MR. GRAY: Thank you. Thank you very much.

9 COMMISSIONER EGGERT: I also want to thank you
10 for coming and participating in today's meeting, and with
11 respect to the current - where would this brown grease
12 normally go if it didn't come to you as -

13 MR. GRAY: Brown grease is often taken to
14 landfills. There are some treatment plants that used to
15 take FOG and more and more wastewater treatment plants
16 are taking FOG. One of the problems of taking FOG to a
17 digester is that - and this is at wastewater treatment
18 plants, anaerobic digesters - is that, at certain levels,
19 it can be toxic to the biological system. So, there is a
20 limit to how much a wastewater treatment plant can
21 actually take of the FOG, and in some cases, the limit
22 comes very quickly. We actually take some FOG now. We
23 are taking FOG to our digesters and starting to see that,
24 see the limitations of what we can do with it. And
25 that's one of the reasons that we are looking at

1 conversion to biodiesel.

2 COMMISSIONER EGGERT: And so, in terms of some
3 of the potential benefits of this, it does result in
4 reduced diversion to landfills and it sounds like you
5 potentially alleviate some of the challenges at the
6 treatment facility. Do you get a tipping fee at all for
7 this?

8 MR. GRAY: We do. There is a level of cost
9 that it takes for us to receive the FOG and to produce
10 the - to actually handle the FOG and treat the FOG, so
11 that covers our cost in that area.

12 COMMISSIONER EGGERT: Excellent. So, I think,
13 yeah, this is a very exciting project. I see at least a
14 theoretical production capacity of 50-100 million
15 gallons, which would be a substantial contribution to
16 diesel consumption in the state. So, I have no further
17 questions. Again, thank you for coming. I'd like to
18 move the item.

19 MR. GRAY: Thank you.

20 COMMISSIONER BYRON: Second.

21 CHAIRMAN DOUGLAS: All in favor?

22 (Ayes.)

23 The item is approved. Thank you.

24 Item 7. Western States Oil Company. Possible
25 approval of Agreement ARV 10-019, for a grant of \$69,233

1 to Western States Oil Company, to retrofit a retail
2 gasoline tank and dispenser into a wholesale biodiesel
3 tank and dispenser. Mr. Yowell.

4 MR. YOWELL: Good morning, Chairman and
5 Commissioners. This project is a result of Program
6 Opportunity Notice 9-006. Western States Oil Company
7 proposes to retrofit an existing retail gasoline tank and
8 dispenser into a wholesale biodiesel tank and dispenser.
9 This site is immediately adjacent to the Kinder-Morgan
10 Pipeline Terminal in San Jose, California, where Western
11 States Oil projects that they will dispense 5,000,250,000
12 gallons of biodiesel from the site into the local Bay
13 Area market. All indications are that this should be one
14 of our fastest projects with a projected completion date
15 of 90 days after contract execution. This project
16 addresses California's weakest link for use in biodiesel
17 and bio-oils, which is our lack of bulk terminal and
18 storage facilities. Our lack of biodiesel terminals and
19 distribution facilities raises the cost of retail
20 biodiesel ultimately, and this should hopefully lower
21 that cost. This pipeline terminal will serve the
22 southern region of the San Francisco Bay Area, which
23 includes San Jose, Sunnyvale, Palo Alto, Fremont, and
24 Hayward, and the project participants, Western States
25 Oil, will provide a minimum of \$217,000 match.

1 MS. DRISKELL: Based on my review of this
2 project and further due diligence, I recommend that the
3 Commission, if it approves this award, include a finding
4 that the project is categorically exempt from further
5 environmental review under CEQA Guideline Section 15301
6 for existing facilities and 15303 for new construction of
7 small structures.

8 MS. JONES: And I would just like to add, if
9 there was any curiosity about it, this company is a
10 California-based company.

11 CHAIRMAN DOUGLAS: Thank you, Ms. Jones.
12 Questions or comments, Commissioners?

13 COMMISSIONER EGGERT: Just a brief comment. I
14 think, you know, again, an example of how the AB 118
15 program is looking at sort of all aspects of the supply
16 chain. You know, particularly as it relates to biofuels,
17 you have issues relating to the generation of the
18 feedstock, itself, the distribution of that feedstock,
19 the processing, and then the distribution of the end
20 product to the consumer. And there are challenges at
21 each of those steps, and so I think, by taking a look at
22 the system challenges and coming up with proposed
23 solutions to those challenges, I think this is an example
24 of one where, as Mr. Yowell mentioned, a weak link in the
25 system, we can provide some assistance to help connect

1 that link.

2 COMMISSIONER BYRON: Mr. Yowell, I just want to
3 make sure I understand this. And I'm certainly in favor
4 of this, but it seems as though, I mean, I think if
5 Kinder-Morgan Pipeline - the terminal is a pipeline
6 company, and they're not really dedicating a pipeline
7 here, they're collecting this, tanking it, and dispensing
8 it. Is that correct?

9 MR. YOWELL: Actually, this is not with Kinder-
10 Morgan, this is a private company, Western States Oil
11 Company, who are immediately next to Kinder-Morgan.

12 COMMISSIONER BYRON: Right, I'm sorry, you're
13 absolutely right, I see that here. So, this is really
14 facilitating the opportunity for this market to grow
15 here.

16 MR. YOWELL: Exactly. We're leveraging in a
17 big big way here.

18 COMMISSIONER BYRON: Okay, excellent.

19 CHAIRMAN DOUGLAS: Other questions, or a
20 motion?

21 COMMISSIONER EGGERT: I would like to move the
22 item.

23 COMMISSIONER BYRON: Second.

24 CHAIRMAN DOUGLAS: All in favor?

25 (Ayes.)

1 The item is approved.

2 Item 8. Great Valley Energy, LLC. Possible
3 approval of Agreement ARV 10 017, for a grant agreement
4 of \$1,989,010 to Great Valley Energy, LLC, to determine
5 the feasibility of constructing a commercial-scale
6 manufacturing facility that will produce ethanol from
7 sweet sorghum. Mr. McKinney.

8 MR. MCKINNEY: Good morning, Madam Chair and
9 Commissioners. I am presenting this item on behalf of
10 Bill Kinney, who is taking a much deserved vacation in
11 Hawaii. Great Valley Energy Company proposes a two-
12 pronged approach under this feasibility study. The first
13 part of that is that they're going to do a series of
14 investigations and process testing to evaluate the
15 feasibility of sweet sorghum as a dedicated Bioenergy
16 crop feedstock for ethanol production. As you may know,
17 sweet sorghum is kind of one of the big three
18 alternatives we evaluate in California as alternatives to
19 corn, that would be sweet sorghum sugar beets and energy
20 cane. Sweet sorghum has a variety of attributes and make
21 it very promising and it has very high sugar content, you
22 can use all parts of the stem and sugar for different co-
23 products, that's called fractionalization as you break
24 that down into different pieces. It can also be grown on
25 highly saline or soils that are not suitable for other

1 food crops. It also takes one-third of the water of
2 other crops in that area such as cotton. For the second
3 part of the feasibility study, they are going to look at
4 the feasibility of small scale, so about a 3 million
5 gallon capacity integrated bio-refineries that could be
6 disbursed throughout the San Joaquin Valley region to
7 take advantage of this crop if it proves feasible. This
8 is in contrast to kind of the macro scale bio-refineries
9 that we currently have in California for ethanol
10 production. We will be providing a grant just over \$1.9
11 million from the Alternative and Renewable Fuel and
12 Vehicle Technology Program funds, and Great Valley Energy
13 will be matching that with about \$2 million. Again, as
14 you may be aware, unemployment in the Southern San
15 Joaquin Valley is quite high, cotton acreage is
16 declining, so cotton processing is declining. We think
17 this presents an exciting opportunity to develop a
18 product that is useful in California, alternative fuel
19 markets, and provide employment benefits in the Southern
20 San Joaquin Valley. Suite Sorghum has a very low carbon
21 intensity value, it's 15 grams megajoule, CO₂ per
22 megajoule, or an 85 percent reduction from the petroleum
23 baseline. I would just like to add, as well, that Great
24 Valley Energy, I think, has been quite nimble. They were
25 poised to build the six of the large corn ethanol bio-

1 refineries in California, they have CEQA clearance for
2 that in Hanford. And due to a series of events, they
3 decided that was not a feasible approach, and they've
4 been actively investigating alternative feedstocks and
5 alternative ways to process those feedstocks and the
6 useful fuels for the California alternative fuels market.
7 So, I really want to commend Mr. Pellens, I'm not sure he
8 was able to make the trip up from Bakersfield today, but
9 his company is really adapting in real time to the
10 challenges and policy goals of California.

11 CHAIRMAN DOUGLAS: Counsel.

12 MS. DRISKELL: Based on my review of this
13 project and further due diligence, I recommend that the
14 Commission, if it approves this award, include a finding
15 that the project is categorically exempt from further
16 environmental review under CEQA Guidelines Sections 15301
17 for existing facilities, and statutorily exempt under
18 CEQA Guidelines Section 15262 for feasibility and
19 planning studies.

20 CHAIRMAN DOUGLAS: Thank you. Now, I do have a
21 blue card from Brian Pellens, Great Valley Energy.

22 MR. PELLENS: Hi. Good morning, Commissioners.
23 I have a carefully prepared statement, but, you know,
24 after listening to staff's report, I don't have really
25 very much to add. I would like to thank staff for their

1 helpful guidance and diligent efforts in meeting the
2 requirements to get this proposal in front of you for
3 consideration. We're confident that we have the right
4 feedstock for California, and California's climate. We
5 are confident that we have brought together the right
6 technology groupings to process that in a way that really
7 makes the most sense, and we're confident that, in our
8 execution of our plan, we'll deliver benefits to
9 California's economy, agriculture, and fuel markets. By
10 providing the funding under this grant to prove out the
11 important technical and commercial concepts of our
12 technology platform, this grant bridges what we refer to
13 as the Valley of Death, which we borrowed from another
14 program, but it's the Valley of Death that kills very
15 promising transformational and acceleration technologies.
16 So we really - we support staff's recommendation for
17 approval under the AB 118 Investment Plan and I'm
18 available if you have any questions at all.

19 COMMISSIONER EGGERT: A question in terms of -
20 I think this is a great project and, first thing, I want
21 to thank you for coming and participating in today's
22 meeting. Do you have any estimates - I know there is
23 some cost information in here in the summary, but what
24 the actual end product could cost, and whether or not it
25 will be competitive with other biofuel pathways?

1 MR. PELLENS: It fits very well into current
2 pricing. At this point, since we're making the best use
3 out of the entire stock, instead of just crushing it and
4 squeezing the juice out, and then burning the rest, or
5 feeding it to cattle, we're actually making value added
6 products out of it, and some of these products are very
7 high value to the point that the ethanol price is must
8 less important. It's less than half of the revenue
9 stream. So it's a step change in ethanol manufacturing
10 and that business model.

11 COMMISSIONER EGGERT: And then, in terms of - I
12 noted one of the interesting things about sweet sorghum
13 is the fact that it can grow on saline land with lower
14 water inputs. Have you done any estimates of what
15 potential water savings could accrue from shifting to
16 sweet sorghum from some of the existing crop systems?

17 MR. PELLENS: We haven't really done it. We
18 are working with UC Davis and the California Biomass
19 Collaborative and they have done some work. I don't
20 think that it's public yet, but they're working with test
21 crops up at Five Points at the Research Extension. And
22 we are seeing significant reductions in water use over
23 other crops. It is maybe half of the water use. There
24 is also other research that's available that says that,
25 with saline soils, you actually increase the amount of

1 sugar in the stock. So, we're anxious to try it out.

2 COMMISSIONER EGGERT: Excellent. Well, thank
3 you very much for the information and, again, thanks for
4 being here. No further questions.

5 COMMISSIONER BYRON: Commissioner, I'd like to
6 also acknowledge Mr. Pellens' presence and your efforts
7 to be here today. Clearly, these funds are important to
8 your company, as well. You know, we're treating all of
9 these like just mundane items on our regular agenda, but
10 these are all very exciting projects, and I'd like to
11 thank the staff, as well, for bringing us these for
12 approval today. It's just really wonderful to hear that
13 these funds are going to such good use to help companies
14 bridge technologies that meet our policy goals. I wish
15 you good luck. I hope it works well.

16 MR. PELLENS: Thank you.

17 CHAIRMAN DOUGLAS: Is there a motion?

18 COMMISSIONER EGGERT: I will move the item.

19 COMMISSIONER BYRON: Second.

20 CHAIRMAN DOUGLAS: All in favor?

21 (Ayes.

22 The item is approved.

23 MR. PELLENS: Thank you.

24 CHAIRMAN DOUGLAS: Item 9. San Diego
25 Metropolitan Transit System. Possible approval of

1 Agreement ARV-10-018, for a grant of \$186,148 to the San
2 Diego Metropolitan Transit System, to replace aged and
3 undersized compressed natural gas (CNG) compressors at
4 the Recipient's South Bay Bus Maintenance Facility with
5 two larger CNG compressors. Mr. Coe.

6 MR. COE: Yes, good morning, Commissioners.
7 I'm Donald Coe with Emerging Fuels and Transportation
8 Office. I'm presenting for your approval the San Diego
9 Metropolitan Transit System upgrade for the CNG fueling
10 station for buses serving the San Diego urban area. This
11 prospective grant is from the Alternative and Renewable
12 Fuels and Vehicle Transportation Program, Alternative and
13 Renewable Fuels Infrastructure Program Opportunity Notice
14 09-006. Grant recipient will be the San Diego
15 Metropolitan Transit System, utilizing a grant agreement
16 of \$186,148, to carry out a CNG fueling station upgrade.
17 The San Diego Metropolitan Transit System will install
18 larger, compressed, natural gas fueling compressors at
19 its South Bay Maintenance facility to enable more rapid
20 refueling of the CNG bus fleet. The existing equipment
21 was installed in 1993. The equipment was originally
22 sized and installed to provide natural fueling for a
23 fleet of up to 50 CNG buses. The San Diego Metropolitan
24 Transit System now has a fleet of 158 CNG buses based in
25 the South Bay Maintenance Facility and plans to add 40

1 more, expanding the fleet to nearly 200 CNG buses. The
2 installation of the two aerial fourth row high capacity
3 compressors will more than double the through-put from
4 1,900 to 5,520 standard cubic feet per minute, and will
5 cut the fueling time per bus. It will allow the
6 refueling MTS's, Natural Gas Buses, as quickly as
7 traditional diesel buses. The Energy Commission will
8 provide \$186,148 in Alternative and Renewable Fuel and
9 Vehicle Transportation Program funding. Additional match
10 will be provided from the Federal Transit Administration
11 of \$1,176,000.

12 CHAIRMAN DOUGLAS: Thank you. Questions or
13 comments, Commissioners? Oh, Ms. Driskell.

14 MS. DRISKELL: Based on my review of this
15 project and further due diligence, I recommend that the
16 Commission, if it approves this project and award,
17 include a finding that the project is categorically
18 exempt from further environmental review under CEQA
19 Guidelines Sections 15301 for existing facilities, 15303
20 for conversion of small structures, and 15304 for minor
21 alterations to land, as well as statutorily exempt under
22 CEQA Guidelines Section 15208 for Pipelines.

23 CHAIRMAN DOUGLAS: Thank you. Questions or
24 comments, Commissioners?

25 COMMISSIONER EGGERT: Again, just a brief

1 comment, Madam Chair. Another great project and, in this
2 case, a nice one to have a partnership with, U.S. Federal
3 Transit Administration. Certainly, transit applications,
4 I think, have been one area of success for introducing
5 alternative fuels in that they have the advantage of
6 being a controlled fleet, but they also represent a great
7 opportunity to expose the public to the new fuel and
8 these things operate in urban environments, and so the
9 air quality benefits are even more important. So, I am
10 encouraged by the fact that we are continuing to look at
11 transit as an entry point for some of these new fuels.
12 CNG, of course, has been around for a while and has been
13 quite successfully deployed here, and that's, I think,
14 evident by the expansion of the fleet within San Diego.
15 But I think they have - I do have one comment after we
16 vote on this, but I'll stop there and I'll move the item.

17 COMMISSIONER BYRON: Second.

18 CHAIRMAN DOUGLAS: All in favor?

19 (Ayes.)

20 The item is approved. Commissioner Eggert.

21 COMMISSIONER EGGERT: Just a quick comment. I
22 wanted - all of the projects, the last, I guess, eight
23 items, come out of the Alternative and Renewable Fuels
24 and Advanced Vehicle Technology Program, and I wanted to
25 recognize the staff for their extremely hard work to

1 bring these to a Business Meeting, as well as Ms.
2 Driskell, I think, sometimes it's difficult to tell from
3 the very brief statements that she makes the amount of
4 work that goes into being able to make those statements,
5 to be able to sort of say, you know, with confidence,
6 that we've evaluated the impacts under CEQA and provide
7 that input to the Commission as a basis, as a
8 contribution to their decision. So, again, thanks to the
9 staff, thanks to the Legal Office, and I think we have
10 some great projects here that we've approved today.

11 CHAIRMAN DOUGLAS: Thank you, Commissioner
12 Eggert. I wholeheartedly agree with those comments.
13 Very well. Item 10. Washington University. Possible
14 approval of Agreement PIR-10-012 for a grant of \$206,433
15 to Washington University to evaluate and test alternative
16 fresh produce disinfection technologies. Mr. Sapudar.

17 MR. SAPUDAR: Good morning. This project
18 resulted from the Emerging Technology Demonstration Grant
19 Program competitive solicitation conducted by the R&D
20 Division's Industrial, Agriculture and Water Team. The
21 contractor is Washington University, they are based in
22 St. Louis, Missouri. There are two principal
23 subcontractors, Duda Farm Fresh Foods in Oxnard,
24 California, and Global Energy Partners out of Walnut
25 Creek, California. The project will be located in

1 Ventura County at the Duda Farms facility. The project
2 budget is \$206,433 PIER and \$85,000 match dollars. The
3 match funds represent about 41 percent of the PIER funds.
4 And of the total budget of match plus PIER funds of
5 \$291,433, 73 percent of those funds will be spent in
6 California. The project term is 36 months, and the
7 purpose of the project is to demonstrate and evaluate the
8 performance of a French cut fruit and vegetable process
9 water treatment system for water and energy efficiency at
10 an industrial scale California celery processing plant
11 operated by Duda Farms. The water treatment system being
12 demonstrated is designed to allow much of the process
13 water to be cleaned and re-used rather than being
14 discharged as wastewater and replaced with fresh water,
15 as is often the case under current practices. Increasing
16 the re-use of process water from the current practice of
17 about one day of use to up to three days of use could
18 result in a decrease of fresh water consumption of up to
19 65 percent, which is equivalent to fresh water savings of
20 about 5 million gallons per year. The total electricity
21 consumed in California for fresh fruit and vegetable
22 processing is estimated at 600 to 800 million kilowatt
23 hours per year. And of that amount, about 50 percent of
24 that amount is estimated to be used for cooling and
25 refrigeration, the process water. The project will

1 determine the relationships between product quality,
2 energy consumption, water consumption, waste water
3 generation, and total cost, which include both capital
4 costs and operating costs. The Emerging Technology
5 Demonstration Grant Program solicitation has been
6 coordinated with the State's energy utilities and
7 Southern California Edison Efficiency staff will provide
8 the energy Measurement and Verification Plan to energy
9 utility standards for this project. Thank you for
10 considering this project for funding, and I would be
11 happy to answer any questions you might have.

12 CHAIRMAN DOUGLAS: Thank you. Questions,
13 Commissioners?

14 COMMISSIONER BYRON: Madam Chair, this project
15 comes through the Public Interest Energy Research Program
16 and it addresses both energy savings, obviously, and
17 water savings. I really don't have a question, except to
18 recommend this to you, these are the kinds of projects
19 that I'm always impressed with, that we've got technology
20 developers who go find a demonstration - a host for this
21 demonstration, and it hopefully will help prove this
22 technology for many other food processing capability
23 throughout the state. So, my thanks to staff, but also
24 to Duda Farm, who has agreed for this demonstration host
25 facility. I'm always amazed how well projects are put

1 together and that we get responses like this to our
2 solicitations. It looks like a very good project that I
3 recommend for your approval.

4 CHAIRMAN DOUGLAS: Thank you, Commissioner
5 Byron. Other comments or questions. Is there a motion?

6 COMMISSIONER BYRON: Madam Chair, I move
7 approval of Item 10.

8 COMMISSIONER WEISENMILLER: I second.

9 CHAIRMAN DOUGLAS: All in favor?

10 (Ayes.)

11 Item 10 is approved.

12 MR. SAPUDAR: Thank you very much.

13 CHAIRMAN DOUGLAS: Item 11. R.W. Beck, Inc.
14 Possible approval of Agreement 500-10-026 for \$475,000
15 with R.W. Beck to develop a Smart Grid research,
16 development, and demonstration road map from the
17 perspective of California's publicly owned utilities.
18 Mr. Coldwell.

19 MR. COLDWELL: Good morning, Commissioners. My
20 name is Matt Coldwell. I am with the Energy Research and
21 Development Division. I'm here today to request approval
22 of an agreement with R.W. Beck, Inc. in the amount of
23 \$475,000. This was the result of a competitive
24 solicitation and R.W. Beck is contributing \$56,000 in
25 match funding. The purpose of this agreement is to

1 develop a Smart Grid research roadmap from the
2 perspective of California's publicly-owned utilities. It
3 is essentially a three-phase project, the first phase
4 will be to develop a baseline of where California
5 publicly-owned utilities are today in terms of their
6 systems; phase two will be establishing a vision for
7 California publicly-owned utilities for the year 2020 in
8 terms of what they want their system to look like then,
9 with the different types of Smart Grid technologies that
10 will be deployed and demand response programs; and then a
11 third phase of the project will be to establish a roadmap
12 to get from the baseline to the 2020 vision. We are
13 working with SMUD, SMUD is going to be a project member.
14 We hope to get as many POUs involved with this project as
15 we can. We have a commitment from Southern California
16 Public Power Authority to participate. And so, we
17 believe the Smart Grid is important because we think
18 Smart Grid will be a cleaner, a more reliable, a more
19 efficient, and a more cost-effective electrical system
20 than what we have today, and we also think that a Smart
21 Grid will enable us to meet a lot of California's energy
22 policies, and I'll highlight three, in particular, SB 17,
23 which is the Smart Grid Deployment Plan requirement that
24 all utilities in the state are required to adopt a Smart
25 Grid Deployment Plan by, I believe, July 1st, 2011, and we

1 think this project will go a great length to informing
2 that effort. The second would be the Renewable
3 Portfolio Standard of 33 percent renewable generation by
4 2020, we think the Smart Grid will really enable us to
5 deploy a large amount of renewable generation resources
6 onto the grid, and then, finally, for obvious reasons, I
7 saved this one for last, AB 32, we believe a Smart Grid
8 will really help us achieve the greenhouse gas reduction
9 goals that the State has established. This project also,
10 as the Commission knows, the American Recovery and
11 Reinvestment Act has pumped a lot of funding into the
12 State of California for Smart Grid RD&D projects, and
13 Mike Gravely, my Manager, is going to discuss how that
14 ties into this project.

15 MR. GRAVELY: Again, this is Mike Gravely from
16 the R&D Division, and this project is in my office. I
17 just wanted to take a second to point out the fact that
18 this vision and roadmap we're doing with the public
19 utilities will also help us leverage - we are
20 anticipating under the current ARRA awards, California
21 received over \$5 million of ARRA funds, we have received
22 over \$900 million of match funds, and PIER is supporting
23 about 25 of these projects in California. And I would
24 point out that several of the large ARRA awards were
25 received by public utilities, both SMUD, LADWP, Glendale,

1 were some of the few that had very large ARRA awards.
2 This project will allow us to integrate that and
3 integrate the other projects into a vision. Also, from
4 some of our previous workshops, one of the reasons we
5 specifically did this one for the public utilities and
6 public workshops, the public utilities had expressed a
7 concern that, if the IOU under SB 17 develops their
8 roadmap and their plan, it may be more costly for the
9 smaller utilities to follow the same plan, and they
10 wanted to be part of California, but they didn't
11 necessarily want to be tied to the Smart Grid that the
12 larger utilities were implementing. So, this will give
13 them a chance to give a voice, or give them a chance to
14 integrate their plans, so that we have one Smart Grid,
15 and it will give us the opportunity. We have two other
16 roadmaps we're doing, one for the investor-owned
17 utilities and one for private industry, so we'll bring
18 all these three together, the ARRA projects together, and
19 vision statements like this and projects like this allow
20 us to integrate and leverage the work we're doing, both
21 with PIER funds, the ARRA funds, with the ultimate goal
22 of commercializing many of these products that are
23 emerging in this market area. So I just wanted to point
24 out the fact that this does have a pretty substantial tie
25 to the ARRA funds that we're receiving and, in fact, the

1 POU's actually have until July of 2012 to do their plan,
2 and we think this project will substantially help them
3 prepare for that SB 17 requirement. I'll be glad to
4 answer any questions, also, if you have any.

5 COMMISSIONER EGGERT: I guess one comment and a
6 question, you kind of alluded to it in your comments, but
7 as has been described to me, part of the reason that we
8 were so successful in receiving some of the competitively
9 awarded ARRA funds on Smart Grid was because of work that
10 was done even eight to 10 years ago, sort of preparing
11 for and conducting strategic planning to be able to plan
12 for these technologies when they came about, and I guess
13 it appears that this is sort of a continuation of that
14 strategy, making sure that we're doing this smartly.
15 Could you maybe just expand for a minute on the
16 interaction between the work that is being done with the
17 POU's and the IOU's, and how this relates to that?

18 MR. GRAVELY: Yes. Again, those two specifics,
19 the SB 17 Deployment Plan requires the IOU's to have a
20 deployment plan developed by July of 2011, and the POU's
21 by July of 2012. One of the things we're doing as part
22 of the upcoming IEPR process and also part of our sharing
23 information is, on December 17th, we're having a workshop
24 where we will have all three contractors presenting their
25 work. We will be sharing their information, so this is

1 obviously a newer contract. We've had the other
2 contracts in place anywhere from 12 months to six months,
3 so they will be able to hear what the other utilities are
4 doing and what the industry sees as a view, and integrate
5 that into their vision, and so that we will - we are
6 having these joint meetings so that all the players can
7 come together and see what's happening, and we can walk
8 away with an integrated package so people can share
9 problems that come up, we can do additional research, and
10 as we do research, we'll be sharing it. But we have
11 consciously planned - and the PUC is also part of this
12 effort, as part of SB 17, we're actually holding this
13 workshop as part of the SB 17 process, so we are sharing
14 this information early on so that we can see how it
15 works, and then the PUC in the spring has a workshop with
16 their utilities, and we can see how this is merging
17 together. So, we have structured it so that we'll gather
18 the research, but we'll also be able to share the results
19 and hopefully help California move forward and make this
20 market as effective as possible.

21 COMMISSIONER EGGERT: Thank you very much.

22 COMMISSIONER WEISENMILLER: Yeah, I think this
23 is a very good project. It's going to be interesting to
24 try to find some linkages, obviously there are 39 POU's in
25 the state, most of whom don't have transmission assets,

1 or they may participate in certain JPA's, but they all
2 tend to not only work together well, but work with WAPA
3 and, to some extent, with Bonneville, so it would be very
4 good if we could use this to connect into the WAPA and
5 Bonneville programs on Smart Grid in a way to find some
6 synergies among those.

7 COMMISSIONER BYRON: Commissioner, that is very
8 good, however, I would note, a lot of this work, I think,
9 will be done around the customer utility interface, as
10 well. And, in fact, if I may, Mr. Gravely and PIER staff
11 have done an excellent job championing the Smart Grid
12 technology development here in the State of California,
13 not just looking out for the IOU interests, which is what
14 we often times see at the Public Utilities Commission,
15 but making sure we get this input from the publicly-owned
16 utilities. My sense is we're seeing a lot of progressive
17 technology development in the POU arena that centers
18 around customers' interests, and I think that's going to
19 be extremely important. So, I'm glad to see that you're
20 not leaving them out of this mix. And the work with the
21 PUC has been ongoing, they're very engaged in the
22 technologies that can be developed here. Nothing but
23 accolades, Mr. Gravely, in terms of the way you've
24 leveraged PIER funding, but also a lot of credit to the
25 publicly-owned utilities, particularly with regard to

1 SMUD, who I think won a substantial award from ARRA for
2 their work and development in this area. So, you said
3 December 17th is that workshop with the PUC?

4 MR. GRAVELY: That is the current plan. It's
5 going to be mid-December in the current schedule to be
6 finalized, but it will be publicly noticed, it will be
7 part of the IEPR process, in addition to part of the SB
8 17 process.

9 COMMISSIONER BYRON: Commissioners, I may not
10 be able to attend that, but I really hope that one or
11 more of you will. I think it will be a real eye-opener
12 and opportunity to work with our colleagues at the PUC to
13 make sure Smart Grid technologies around the customer
14 side are developed smartly here in California.
15 Commissioner.

16 COMMISSIONER WEISENMILLER: I was just going to
17 follow-up. That is a very good point, Commissioner
18 Byron, and I think you and I are probably some of the few
19 people who have experience both with PG&E and SMUD's
20 Smart Meter program.

21 CHAIRMAN DOUGLAS: Is there a motion,
22 Commissioners?

23 COMMISSIONER BYRON: Madam Chair, I move
24 approval of Item 11.

25 COMMISSIONER WEISENMILLER: I'll second it.

1 CHAIRMAN DOUGLAS: All in favor?

2 (Ayes.)

3 Item 11 is approved. Thank you, both.

4 Item 12. Minutes. Possible approval of the
5 October 20th, 26th and 28th, 2010 Business Meeting Minutes.
6 We'll take Item 12a, b, and c.

7 MR. LEVY: Commissioners, before you proceed on
8 that item, may I just remind the Commission that the
9 October 20th Business Meeting spans two days, and so there
10 are two sets of Minutes for that Business Meeting?

11 CHAIRMAN DOUGLAS: Thank you.

12 COMMISSIONER BYRON: Correct. Madam Chair, so
13 I will not be able to - I was not in attendance at the
14 October 21st Business Meeting.

15 CHAIRMAN DOUGLAS: You're right. Well, we'll
16 take this -

17 MR. LEVY: Pardon me again. The second day of
18 the October 20th Business Meeting.

19 COMMISSIONER BYRON: Correction, the second day
20 of the October 20th Business Meeting.

21 CHAIRMAN DOUGLAS: So let's take up the Item
22 12a first, then. Do I have a motion on item 12a?

23 COMMISSIONER EGGERT: I will move the item.

24 COMMISSIONER WEISENMILLER: I'll second.

25 CHAIRMAN DOUGLAS: All in favor?

1 (Ayes.)

2 COMMISSIONER BYRON: Abstain.

3 CHAIRMAN DOUGLAS: Item 12a is approved. And
4 now let's take up Item 12b and c.

5 COMMISSIONER BYRON: Madam Chair, I will move
6 approval of Item 12b -

7 CHAIRMAN DOUGLAS: And c?

8 COMMISSIONER BYRON: And c.

9 COMMISSIONER WEISENMILLER: I'll second.

10 CHAIRMAN DOUGLAS: All in favor?

11 (Ayes.)

12 Item 12b and c are approved.

13 Item 13. Are there any Commission Committee
14 Presentations and Discussion?

15 COMMISSIONER EGGERT: No specific
16 presentations, but I would note that we had an election
17 yesterday and there were a number of different
18 propositions passed, some of which may have some bearing
19 on this agency, and so hopefully we'll be able to
20 understand, you know, what that could mean for programs
21 and such.

22 CHAIRMAN DOUGLAS: Thank you. All right, Item
23 14. Chief Counsel's Report.

24 MR. LEVY: I have no report today.

25 CHAIRMAN DOUGLAS: Item 15. Executive

1 Director's Report?

2 MS. JONES: I have no report today, thank you.

3 CHAIRMAN DOUGLAS: Item 16. Public Advisor's
4 Report.

5 MS. JENNINGS: I have no report today.

6 CHAIRMAN DOUGLAS: Is there any public comment
7 in the room? Is there any public comment on the phone?
8 All right, we are adjourned.

9 (Whereupon, at 11:23 a.m., the business meeting was
10 adjourned.)

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