

COMMISSIONERS PRESENT

Karen Douglas, Chair

James D. Boyd, Vice Chair

Jeffrey D. Byron

Anthony Eggert

Robert Weisenmiller

STAFF PRESENT

Melissa Jones, Executive Director

Jonathan Blee, Chief Counsel

Jennifer Jennings, Public Advisor

Harriet Kallemeyn, Secretariat

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P R O C E E D I N G S

MARCH 3, 2010

10:07 a.m.

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

Please join me in the Pledge.

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

CHAIRPERSON DOUGLAS: Very well, we have a short agenda this morning. We will begin with Item 1, Butte Glenn Community College District. Possible approval of a \$766,231 loan to Butte Glenn Community College District to update lighting systems, mechanical, and HVAC systems at the Butte College campus. Mr. Ehyai.

MR. EHYAI: Thank you. Thank you, Chairman, good morning Commissioners. My name is Amir Ehyai and I am with the Fuels and Transportation Special Projects Office. Butte Glenn Community College District is requesting the loan in the amount of \$766,231 to implement a number of energy efficiency projects at the Butte College campus. The projects include lighting systems upgrades, installation of premium efficiency motors, installation of tankless water, and replacement of older inefficient HVAC equipment. In total, the projects will reduce the college's annual energy use by other 380,000

1 kilowatt hours of electricity and nearly 3,000 therms of
2 natural gas, or 8 percent of their utility bills.

3 The total project cost is estimated to be \$766,231,
4 to be fully funded by the Energy Commission loan at an
5 interest rate of 1 percent. The annual energy cost savings is
6 estimated to be \$61,579, and as such, the overall payback for
7 the project is 12.4 years. The projects are also eligible for
8 utility incentives totaling over \$82,000. As a note, the
9 energy efficiency projects under discussion were identified
10 and recommended for implementation based on an energy
11 efficiency study conducted under the Energy Commission's
12 Energy Partnership Program. If approved for the loan, the
13 College will install all the recommended projects as
14 identified in our study.

15 An additional note, of all the recommended projects,
16 the most cost-effective project is the installation of LED
17 lights in place of mercury vapor down lights. This LED
18 project is similar to a product that the PIER funded
19 California Lighting Technology Center has evaluated. The
20 technology is being showcased at the Lighting Center in an
21 objective, commercialized technology project.

22 In closing, staff has determined that the loan is
23 technically justified and meets eligibility requirements of an
24 Energy Commission loan. This item has been previously
25 approved by the ARRA Ad Hoc Committee, and I am here today

1 seeking your approval. Thank you.

2 CHAIRPERSON DOUGLAS: Thank you. Are there any
3 questions?

4 COMMISSIONER BYRON: Quick question. I am sure that
5 this is all -- this project is in line with all the
6 requirements, but I noticed that it is a 100 percent loan for
7 the project, and I was just wondering, do we do many projects
8 like this where the applicant does not have any skin in the
9 game?

10 MR. EHYAI: In many -- this may be the case many
11 times. In this instance, they are eligible for incentives of
12 \$82,000, and they will apply that towards paying down the loan
13 upon receiving that incentive. That is usually paid after the
14 project completion.

15 COMMISSIONER BYRON: Uh huh. But do you know, are
16 there -- I do not recall seeing any where it is 100 percent
17 loaned or incent to value within the City or the Community
18 having any investment.

19 VICE CHAIR BOYD: Commissioner, I wonder if this is
20 -- I do not want to use the term "artifact," but this is
21 because of ARRA that they are able to do this.

22 MR. EHYAI: That may be the case, sir, taking
23 advantage of the 1 percent; however, because the overall
24 payback for this project is less than 13 years, they are able
25 to fully fund the project with our loan. In many cases, if

1 projects exceed 13 years simple payback --

2 COMMISSIONER BYRON: Right, I got that, I understand
3 that, I am going in a different direction. Someone else has
4 joined you. Did you join for any particular reason?

5 MR. BUTLER: Yes, good morning, Commissioners. My
6 name is John Butler. I am a Supervisor in the Special
7 Projects Office. You know, we do not have the statistics off
8 the top of our heads how many of these loans are 100 percent
9 financed, however, we do provide up to 100 percent financing
10 based on the simple payback --

11 COMMISSIONER BYRON: I understand.

12 MR. BUTLER: -- so I guess I need to understand your
13 question a little better.

14 COMMISSIONER BYRON: It is a potluck dinner
15 question, okay? I have always noticed, if somebody brings
16 something to the party, they tend to enjoy it more. In this
17 case, they bought into it and the project tends to be more
18 successful when they have skin in the game. And just as a
19 general principal, I think that is a good thing and I was just
20 wondering, is this unique? Is this a one-off, or have we done
21 a number of these kind of projects? My sense is remembering
22 what we have reviewed and read recently, there is always some
23 skin in the game on the part of the applicant. And I am just
24 wondering how unique this was and whether or not we are going
25 to see more of these.

1 MR. BUTLER: I do not believe this is a unique
2 situation for ARRA loans, but a lot of times our loan
3 recipients do indeed have some skin in the game and provide
4 some cost share to be able to bring that --

5 COMMISSIONER BYRON: I am aware of that.

6 MR. BUTLER: -- but we have indeed funded a number
7 of loans, 100 percent of the total project cost in the past.

8 COMMISSIONER BYRON: Okay.

9 MS. JONES: And I will just interject that --

10 COMMISSIONER BYRON: Go ahead, Ms. Jones.

11 MS. JONES: -- that on a particular project like
12 this where it is one of the rural counties who are
13 particularly strapped for cash, funding 100 percent allows
14 them to do projects, whereas if they had to put up money, they
15 may not be in a situation where they could actually go forward
16 with the energy efficiency.

17 COMMISSIONER BYRON: And I am sure it will be
18 successful, but if it is not, I would be interested to know.

19 MR. BUTLER: Absolutely.

20 COMMISSIONER BYRON: Thank you.

21 MR. BUTLER: Thank you.

22 CHAIRPERSON DOUGLAS: I will just make a brief
23 comment, well, actually, Commissioner Eggert, go ahead.

24 COMMISSIONER EGGERT: Oh, actually, and just to
25 clarify the loan conditions, this is payback -- they have to

1 pay us back over how many years? What is the -- 12 years?

2 MR. EHYAI: Actually within 15 years.

3 COMMISSIONER EGGERT: Within 15 years.

4 MR. EHYAI: The interest on top of the principal
5 will make it up to 15 years.

6 COMMISSIONER EGGERT: Okay, so -- and it is a 1
7 percent?

8 MR. EHYAI: It is a 1 percent; that is right.

9 COMMISSIONER EGGERT: The comment I was going to
10 make was just that I greatly appreciated your comment about
11 the connection to the PIER technology that would be included
12 in this project. I did notice also that they did have an HVAC
13 replacement as a component of this --

14 MR. EHYAI: Yes.

15 COMMISSIONER EGGERT: -- is there any connection to
16 that with either the Cooling Center or --

17 MR. EHYAI: I did look into that, but in this case,
18 no. The HVAC -- there are actually three separate projects,
19 the bigger one is the replacement of three constant volume air
20 handlers, they are going to be replaced with variable air
21 volume air handlers with the addition of outside economizers.
22 I could not determine that that was a recent technology that
23 has been developed at the Cooling Center.

24 COMMISSIONER EGGERT: Thank you.

25 CHAIRPERSON DOUGLAS: I think, just reflecting on

1 Commissioner Byron's question, in any case where we are
2 looking at a loan rather than a grant, there is an automatic
3 element of skin in the game and probably more so when it is an
4 ARRA loan because it comes with rigorous reporting
5 requirements and certainly significant scrutiny and interest
6 in the success of these projects, so I think Commissioner
7 Byron's point is very good, that we look for local cost share
8 and participation wherever possible, but I did not want to let
9 the record appear as though there was really no skin in the
10 game because that is not going to be the case in any of these.

11 COMMISSIONER BYRON: That is right. It is a loan,
12 they do have to pay it back, so thank you, Madam Chair. If
13 there is no further comment, I would be more than happy to
14 move the item.

15 COMMISSIONER WEISENMILLER: Actually, just a
16 question for the Executive Director. After we vote these out,
17 generally on the ARRA funds, how are we doing in terms of the
18 control agency processing?

19 MS. JONES: We have been working with General
20 Services and in general, on the ARRA projects, they have been
21 pretty quick on turnaround. The Governor's Task Force, one of
22 the things that they have done is try to streamline the review
23 through DGS. So it is shorter than it has been in the past.

24 COMMISSIONER WEISENMILLER: Roughly, how long is it?

25 MR. BUTLER: Well, just for clarification, loan

1 agreements do not go through DGS for approval, so there is not
2 that extra hurdle that we have to overcome to execute these
3 agreements.

4 MS. JONES: But how about contracts?

5 MR. BUTLER: Contracts, I am not familiar enough
6 with that process to be able to give the timeframe,
7 unfortunately.

8 MS. JONES: Yeah, we can get back to you.

9 COMMISSIONER WEISENMILLER: Okay.

10 COMMISSIONER EGGERT: And maybe just one last -- so
11 just to clarify, in terms of -- if I look at the simple
12 payback here which is 12.4, and you said the 1 percent loan
13 carries the payback to 15 years, is that --

14 MR. EHYAI: In fact, 13 years.

15 COMMISSIONER EGGERT: Okay.

16 MR. EHYAI: As part of the statute for the loan
17 program, the loans must be repaid to principal and interest
18 within 15 years. At an interest rate of 1 percent, we have
19 determined that projects that have the simple payback of 13
20 years or less can be fully funded --

21 COMMISSIONER EGGERT: In other words, the savings
22 can offset the -- the energy savings can offset the cost of
23 the loan?

24 MR. EHYAI: That is exactly right and that is the
25 basis for our loans, the energy savings is the basis for

1 repayment.

2 COMMISSIONER EGGERT: Excellent. I move this item

3 --

4 CHAIRPERSON DOUGLAS: We have a motion. Are you

5 seconding?

6 COMMISSIONER EGGERT: Oh, we do have a motion, I am

7 sorry. I second the motion, then.

8 CHAIRPERSON DOUGLAS: We have a motion and a second.

9 All in favor?

10 (Ayes.)

11 The item is approved.

12 Item 2. City of Indian Wells. Possible approval of

13 a \$715,000 loan to the City of Indian Wells to install seven

14 small photovoltaic arrays totaling 197 kilowatts at Civic

15 Center facilities. Mr. Wang.

16 MR. WANG: Good morning, Commissioners. My name is

17 Joseph Wang and I am also working in the Special Projects

18 Office. The City of Indian Wells is applying for a \$715,000,

19 1 percent ARRA loan, to install seven small photovoltaic

20 systems, totaling 197 kW at the City Center Building sites.

21 Five of these projects are roof-mounted system, and two are

22 carport systems. The city has retrofitted the lights and

23 replaced the air-conditioning system, and the city would like

24 to install these pv projects to zero out their electrical

25 usage at these sites. The total project cost is about \$1.7

1 million. In addition to the \$715,000 CEC loan, the city will
2 receive about \$607,000 in California Solar Initiative Rebates
3 and they will use the \$390,000 city funds to complete the
4 remaining project cost.

5 The estimated annual cost savings is about \$55,000,
6 and the payback of this loan is about 13 years based on the
7 loan amount. And the staff has reviewed the project
8 information and recommends the approval of this loan.

9 CHAIRPERSON DOUGLAS: Thank you. Questions?

10 COMMISSIONER EGGERT: So one question. Is my math
11 correct that if the total cost is \$1.7 million and it is 197
12 kilowatt, on a per kilowatt basis it is about \$8,000 or
13 \$9,000? Is that the sort of -- I am not sure, I do not have a
14 calculator, but if my --

15 MR. WANG: The city will sign a Net Medium
16 Agreement, so whatever excess electricity is produced from the
17 pv systems will be sent back to the utility for sometimes
18 unpeak, or sometimes mid-peak electric rates.

19 COMMISSIONER EGGERT: I guess my question is more
20 along the lines of, are we gaining -- through these projects,
21 are we gaining information about the cost trajectory of some
22 of these systems as we are funding, you know, we are getting
23 information about what the capacity is and what the cost is.

24 MR. WANG: Yeah, we do monitor other, you know,
25 invoices when they come in, and we also monitor the system

1 performance, too.

2 COMMISSIONER EGGERT: And in terms of this
3 particular project, how does it compare to where we think
4 these pv systems should be in terms of installed costs?

5 MR. BUTLER: And just to clarify, I think, Joseph, I
6 believe the Commissioner is asking, you know, how much is it
7 costing on a kilowatt basis for the installed project costs,
8 and probably is this in line with what we have seen in the
9 past?

10 MR. WANG: For smaller systems like these, they are
11 in line. It costs about \$85,000 -- \$8,500 per kilowatt
12 installed compared to like a \$6,000 to \$7,500 kW for large
13 scale systems.

14 COMMISSIONER EGGERT: And that is consistent with
15 what we have been seeing?

16 MR. WANG: Yes. In some cases the installation
17 costs per kW system for small pv projects exceeds \$10,000 per
18 kW.

19 COMMISSIONER EGGERT: Okay, thanks.

20 COMMISSIONER BYRON: Good reminder that
21 photovoltaics are expensive, Commissioner.

22 COMMISSIONER EGGERT: And I guess I move the item.

23 COMMISSIONER BYRON: Second.

24 CHAIRPERSON DOUGLAS: All in favor?

25 (Ayes.)

1 This item is approved.

2 Item 3. City of South Lake Tahoe. Possible
3 approval of a \$657,461 loan to the City of South Lake Tahoe to
4 implement a number of energy efficiency measures at the city's
5 recreation and swimming pool complex. Mr. Wang.

6 MR. WANG: Yeah, I am covering this item, too. The
7 City of South Lake Tahoe is applying for a \$657,461, 3 percent
8 ECAA loan to implement several energy efficiency projects at
9 the city indoor recreation center. These projects include the
10 interior lighting retrofit and also pool pump replacement and
11 also a cogeneration system. The interior T12 lights will be
12 converted to T8 with electronic ballasts, and the pool pump
13 motors will be replaced with a premium efficiency motor, with
14 a variable speed drive control, and a new sand filter system and
15 a new boiler will replace the old filter and the 30-year-old
16 boiler.

17 The cogen system is 65 kW microturbine cogen system
18 to supply both electricity and heat to the swimming pool.
19 This project will reduce over 95 percent of the total
20 electricity use at the site and save over \$60,000 annually in
21 energy costs, and the simple payback is about 11 years. I
22 just want to also give you a little bit more information. The
23 city is also retrofitting the building and they are replacing
24 the pool building bubble cover with their own funds, and these
25 are just the energy efficiency projects they want to get the

1 loan for.

2 The staff has reviewed the project information and
3 recommends the approval of this loan.

4 CHAIRPERSON DOUGLAS: Mr. Wang, I cannot help but
5 ask, is the reason this is ECAA instead of ARRA due to the
6 Vice President's admonition against funding swimming pools
7 with ARRA money?

8 MR. WANG: ARRA funds cannot be used for swimming
9 pool related projects.

10 CHAIRPERSON DOUGLAS: Thank you. Other questions?

11 COMMISSIONER BYRON: So it is more than an
12 admonition.

13 CHAIRPERSON DOUGLAS: I believe so, it was at least
14 a very very strong warning. I do not know if it is written in
15 the actual bill, but we are following it. I am pleased to see
16 that we are not funding swimming pools, given all that. Other
17 questions or comments?

18 COMMISSIONER BYRON: Madam Chair, I would move
19 approval of Item 3.

20 VICE CHAIR BOYD: Second.

21 CHAIRPERSON DOUGLAS: All in favor?

22 (Ayes.)

23 Item 3 is approved.

24 MR. WANG: Thank you.

25 CHAIRPERSON DOUGLAS: Thank you.

1 VICE CHAIR BOYD: I am pleased to see we are funding
2 efficiency measures of this magnitude, though.

3 CHAIRPERSON DOUGLAS: That is absolutely right, and
4 my comment was a little flip. Energy efficiency in swimming
5 pools is a very meritorious project and I am glad that we are
6 funding it through the ECAA program.

7 VICE CHAIR BOYD: And it is bigger than swimming
8 pools, we have got the microturbines and a lot of other pieces
9 involved to make a significant upgrade to their system.

10 CHAIRPERSON DOUGLAS: Absolutely, and with a
11 reasonably good payback period.

12 Item 4. Makel Engineering, Inc. Possible approval
13 of Agreement PIR-09-014 with Makel Engineering, Inc., for a
14 \$580,706 grant to develop and demonstrate a biogas-fueled
15 combined heat and power system. Mr. Bining.

16 MR. BINING: Good morning, honorable Commissioners
17 and everybody here at the meeting. My name is Avtar Bining
18 and I am Project Manager in Energy Systems Research Office of
19 Energy Research and Development Division at the Energy
20 Commission. This project is a grant solicitation that we
21 released in December 2008 to solicit proposals on combined
22 heat and power systems, and the purpose of this solicitation
23 was to advance the CHP technology and also all the related
24 technologies that we use in combined heat and power systems.
25 The overall objective of this solicitation was to achieve high

1 efficiencies and also to make these systems more clean, more
2 affordable, and cost-effective in the various applications.

3 The proposals were due in February 2009, we received
4 25 proposals, and these proposals were evaluated by a team of
5 technical reviewers from two different Divisions at the Energy
6 Commission. Eleven proposals passed by getting a minimum
7 passing score, and these proposals were ranked after applying
8 California Business Entities Preference Points according to
9 Assembly Bill 2267. After we ranked these proposals, we
10 presented these proposals to the Research and Development
11 Policy Committee of the Commission for getting their approval,
12 with the full support from my Manager, Mike Gravely, and my
13 Division Deputy Director, Thom Kelly. And these proposals
14 needed a total of \$9.15 million and we got approval for
15 funding eight proposals because the total requested funds for
16 these 11 proposals was more than the funds available. So
17 these proposals were ranked, a Notice of Proposed Awards was
18 released in December 2009, and after that we started preparing
19 these grant agreements. And today it is my great privilege
20 and my pleasure to present one of these eight items for your
21 approval. This first item is ranked number 4 out of a total
22 of 25 proposals, and this proposal is to develop and
23 demonstrate a combined heat and power system that uses an
24 internal combustion engine, using an advanced ignition
25 technology and, as you know, in combined heat and power

1 systems, they provide all those benefits of higher efficiency,
2 but internal combustion engines have problems achieving those
3 initial standards that are very stringent, and the California
4 Air Resources Board has standards that all combined heat and
5 power systems have to meet, and those emission standards are
6 equivalent to the Center Power Plants. So this technology
7 that this project will develop will strive to achieve those
8 kinds of emissions standards, besides achieving the high
9 efficiency on biogas fuel at dairy farms in California. So
10 this project will use a renewable energy that is otherwise
11 wasted on dairy farms and creating all kinds of environmental
12 problems. So, overall, this project will achieve those high
13 efficiencies, reduce emissions of criteria pollutants, as well
14 as greenhouse gas emissions. And also, it will conserve fuel-
15 like metal gas that dairy farms do not really use. And as you
16 know, milk prices have been falling, but the energy price is
17 increasing, so portions of these dairy farms, if they started
18 using their manure to produce biogas and use this kind of
19 technology to generate power, and use that waste to heat for
20 their heating needs, this will make those dairy farms more
21 profitable and we can enjoy low prices of milk. So I request
22 your approval of this item and we can do this project.

23 VICE CHAIR BOYD: Question or comment?

24 CHAIRPERSON DOUGLAS: Please.

25 VICE CHAIR BOYD: First, let me just say, I am going

1 to be -- I am very supportive of this proposal. I have
2 invested a lot of time, as have a lot of people here,
3 including Avtar and dairies, dairy digesters, biogas, and the
4 internal combustion engine problem that has prevented
5 emissions there, that has prevented a lot of projects from
6 being able to be launched that otherwise could. Avtar, you
7 kind of answered one of my questions when I read this, my
8 first question to you, this is ranked 4, why is it not ranked
9 1? You told us there are eight proposals that will be coming
10 forward, or maybe some have and I forgot them, so this just
11 happens to be ranked 4 of eight projects that have or will
12 come before this body. Is that correct?

13 MR. BINING: You are correct. After we ranked these
14 projects and released a Notice of Proposed Awards, we started
15 putting together these grant --

16 VICE CHAIR BOYD: This is just the first one to the
17 trough, is that right?

18 MR. BINING: Well, so that is the beauty of this
19 ranked fourth project, that this went through our process fast
20 and there will be seven more coming, and my next item, that is
21 ranked fifth. So we will be bringing all of these eight
22 projects.

23 VICE CHAIR BOYD: Thank you. Another question,
24 mainly of you and staff. Recently I had the opportunity to
25 spend time at Sandia Labs and learn they are doing an

1 incredible amount of work on HCCI. Are we plugged into that
2 effort?

3 MR. BINING: Yes, this is not the only project that
4 we have done on this kind of technology, like HCCI.
5 Previously, also, we funded one project with Lawrence
6 Livermore National Lab, and we also have another project
7 currently going on with the Stromberg Industries in Colorado.
8 So we are trying to achieve the objective of this HCCI
9 technology by trying different approaches, and this project
10 builds on our earlier project efforts, and also we are in kind
11 of -- we know what Sandia is doing, there are projects going
12 on everywhere, and there is a University of California
13 Berkeley Professor who has also worked on this technology
14 before, he is also involved in this project.

15 VICE CHAIR BOYD: Okay, thank you. One last comment
16 not directed to you, Avtar, or even to this project, per se,
17 but seeing that we have the honor of both Mr. Gravely and the
18 Deputy Division Chief -- or the Division Chief -- the Deputy
19 Director and Division Chief, Mr. Kelly -- I will get it right
20 yet before I leave -- one observation and I know Commissioner
21 Byron and I have talked a little bit about this on the
22 Research Committee, and I just want to point it out, I know
23 you are working really hard, the staff continuously has on
24 this, but it just continues to concern me, in light of the
25 difficulties we have with people across the street

1 understanding our program, and the outputs thereof, and what
2 have you, that in December in 2008 we put out a PON, in March
3 of 2009, you know, is the deadline to receive input, and in
4 March of 2010, we are acting on the first of the items, and we
5 want to work with you all to see how we can move that along a
6 little more quickly so we can get results more quickly, or
7 satisfy our critics that we can move quickly in this arena.
8 So just a comment noticing the audience and not worrying about
9 it too much. In any event, that answers my questions and, at
10 the appropriate time, I would be glad to make a motion.

11 COMMISSIONER EGGERT: As a former farm hand on a
12 family dairy farm, I appreciate the efforts to find
13 opportunities to improve the economics of dairy farming,
14 although, you know, I will not tell my Wisconsin friends that
15 I am part of helping out with the California economic system
16 for milk production. As I understand, you know, we talked
17 about this project earlier, this is taking an existing engine,
18 I think, was it Navistar?

19 MR. BINING: No, this is Caterpillar.

20 COMMISSIONER EGGERT: Caterpillar, that is right.
21 And then basically adapting it to run on a lower quality gas,
22 using HCCI, and that the technology, if successful, could then
23 be licensed back to either Caterpillar or perhaps other
24 companies to produce this for commercial sale. Is that right?

25 MR. BINING: That is right.

1 COMMISSIONER EGGERT: Okay. And then I guess I was
2 not aware, but I guess apparently we also receive some of the
3 royalties if we are successful in licensing that technology if
4 it --

5 MR. BINING: Yes, in all the PIER projects, we have
6 royalty payment provisions. If this technology is
7 commercialized engine, it is revenue, then we receive royalty
8 payments on all of our commercialized projects. And this
9 project has those kinds of provisions, as well.

10 COMMISSIONER EGGERT: Thank you. And then, I guess
11 it seems like the main opportunity here is the ability to
12 address the NOx problem as being one of the major barriers.

13 MR. BINING: Yes. NOx is a major barrier, but there
14 is a trade-off between NOx emissions and carbon monoxide
15 emissions, and that is the advantage of this particular
16 technology that we run these engines very lean and, in this
17 case, it is automatically lean because it is a low quality
18 fuel. But, on the other hand, when we have conventional
19 ignition systems, we can produce carbon monoxide because we
20 can run it at high temperatures, and so on. But NOx is a big
21 problem and it basically increases in those kinds of ignition
22 systems, so that is the advantage of this technology, that it
23 does not allow those kinds of high temperatures to go beyond
24 control, to have very high NOx, but at the same time it can
25 burn all the hydrocarbons so that there is no CO2 emissions.

1 COMMISSIONER EGGERT: Yeah, no, it seems like a
2 great application, so I think this is a great project.

3 VICE CHAIR BOYD: Commissioner, I remind you, you
4 now are employed by the state with the *happy* cow.

5 COMMISSIONER EGGERT: Yeah, I will not comment on
6 that.

7 COMMISSIONER BYRON: Mr. Bining, this is a good
8 project, I am certainly going to support it, and I am glad to
9 see there is a technology effort to try and solve this
10 conflict, if you will, in state objectives. We have got to
11 solve this, and I do not know that it is going to just be
12 solved on a technical basis, although that will do it; but
13 this notion that we have got strict emission standards we need
14 to meet, but at the same time we can be displacing fossil
15 fuels and greenhouse gases, and methane -- methane plus CO2,
16 so I applaud your efforts to do this from a technology point
17 of view, and I encourage you to work with the Air District --
18 it is in San Joaquin, I take it?

19 MR. BINING: We will see. This project is with
20 Makel Engineering in Chico, California.

21 COMMISSIONER BYRON: Oh, so it is north.

22 MR. BINING: And they will see, after they develop
23 this technology, test it in the lab in Chico, then they will
24 decide which dairy farm is suitable for doing this kind of
25 demonstration and also they will be connecting it with the

1 Grid, also, so that they can go through the full range of Rule
2 21 and so on, and show that if there is a surplus power at
3 some time at the dairy farm that they do not use, they can put
4 it back to the Grid. So they have not decided the exact site
5 with the demonstration, but they are looking at some dairies
6 near Chico so that it is a manageable project for them because
7 they will be going back and forth to that site quite
8 frequently. But at the same time, they have been talking to
9 Sacramento Municipal Utility District, SMUD, to see if they
10 are interested in giving them some site over this Sacramento
11 area so that we can use some kind of public visibility
12 opportunity in the Sacramento Region around us. So we are
13 looking at some dairies near Chico because of their
14 preference, but they are also indicating that they would
15 rather prefer some dairy around Sacramento.

16 COMMISSIONER BYRON: Okay. Thank you.

17 VICE CHAIR BOYD: I will move approval.

18 COMMISSIONER BYRON: Second.

19 CHAIRPERSON DOUGLAS: All in favor?

20 (Ayes.)

21 The item is approved.

22 Item 5. University of California Irvine. Possible
23 approval of Agreement PIR-09-015 with the University of
24 California at Irvine for a grant of \$666,285 to develop a low-
25 emission flexible-fuel control system to manage exhaust

1 quality and heat content in distributed generation and
2 combined heat and power systems. Mr. Bining.

3 MR. BINING: This is the second project that we are
4 presenting today out of the same solicitation. And without
5 repeating my brief information about the solicitation, I will
6 focus on the presentation of this particular project. This
7 project is at the University of California Irvine in
8 California. In this project, the University of California
9 Irvine will develop and demonstrate an exhaust energy control
10 technology which will involve the hardware, as well as
11 software components, for distributed generation and combined
12 heat and power systems, operating on natural gas and also,
13 potentially later on, on renewable fuels. The overall
14 objective of this project is again to optimize the overall
15 efficiency of these combined heat and power systems and to
16 improve their cost-effectiveness in various applications. In
17 this particular project, there will be a supplemental burner
18 to provide extra heat if it is needed so that this combined
19 heat and power system can be used most of the time, rather
20 than just some of the time, which often happens when there is
21 no matching between the electrical load and the thermal load,
22 or the system is incapable of optimizing those two needs. So
23 this project is taking advantage of little advance technology
24 of integrating the conventional heating systems like duct
25 burners, and also the conventional combined heat and power

1 system. But the control technology becomes a little more
2 complex in that, so this project will solve that problem, how
3 these two systems will become one complete cost-effective,
4 efficient, low-emission system, to provide the full
5 utilization of electrical demand or meet the full electrical
6 demand and meet the full thermal demand whenever it is needed
7 either for heating or cooling.

8 Again, the overall objective of this project is to
9 increase the overall CHP efficiency, reduce greenhouse gas
10 emissions, which happens when we increase our efficiency, and
11 to achieve the objective of providing both electric and
12 thermal energy to the buildings where combined heat and power
13 systems are used. And also, with this system, there will be
14 operational flexibility that, whenever the system can be
15 either used for heating alone, or for power generation alone,
16 and using best heat for heating and cooling purposes.

17 The overall term of this project is 48 months, but
18 the project may get completed sooner. As you know, in this
19 project, there are a number of graduate students who will be
20 working on this project and they usually are motivated to work
21 extra, at very little pay, and there will be additional
22 benefit of this project that these graduate students, they
23 will be doing the research and doing a real world project to
24 develop this system and to make these CHP systems affordable
25 and cost-effective. In addition, there are a number of other

1 partners in this project, and they will be providing the
2 hardware and the overall project will be completed hopefully
3 within or less than 48 months. And we recommend approval of
4 this project, as well.

5 CHAIRPERSON DOUGLAS: Go ahead.

6 COMMISSIONER EGGERT: I appreciate the last
7 comments, I think from experience University research
8 activities sometimes are not necessarily the most efficient or
9 effective at delivering product on time, but the value that
10 you get from the training of the graduate students, I think,
11 more than makes up for sometimes some of the challenges that
12 exist in sort of a university structure. And I think this
13 looks like one of those projects that is kind of well matched
14 to that type of a program. And I guess I just wanted to
15 clarify, it appears that this is both measurement equipment
16 and control technologies and algorithms that could be applied
17 to a multitude of systems.

18 MR. BINING: Yeah, if we are successful in this
19 technology, this can be applied all across all kinds of CHP
20 systems.

21 COMMISSIONER EGGERT: Okay. Actually, that was all
22 I had.

23 COMMISSIONER BYRON: Madam Chair, I move approval of
24 Item 5.

25 VICE CHAIR BOYD: Second.

1 CHAIRPERSON DOUGLAS: All in favor?

2 (Ayes.)

3 Item 5 is approved. Thank you.

4 Item 6. Minutes. Approval of the February 24th,
5 2009 Business Meeting Minutes.

6 VICE CHAIR BOYD: Move approval.

7 COMMISSIONER BYRON: Second.

8 CHAIRPERSON DOUGLAS: All in favor?

9 (Ayes.)

10 The Minutes are approved.

11 Item 7. Commission Committee Presentations and
12 Discussion. I have a brief item. Does anyone else have --

13 VICE CHAIR BOYD: A brief comment, go right ahead.

14 CHAIRPERSON DOUGLAS: Oh, I will start. We are
15 coming into the Legislative Session and that means, among
16 other things, there is going to be an uptick in oversight and
17 informational hearings. I have been asked to testify in one
18 hearing that will occur on Monday at the Assembly Utilities
19 and Commerce Committee. The hearing is broadly about job
20 creation and work force development. The topic that I would
21 be addressing is an overview of our ARRA programs and
22 expenditures. My understanding is that Deputy Director Terry
23 O'Brien has been asked to present an overview of our progress
24 on siting ARRA projects, so we will be working with all of
25 your offices and talking about how to present the good work of

1 the Energy Commission in these two areas, in particular, as we
2 move into Monday's hearing, and I expect that there will be a
3 considerable amount of interest in these topics going forward.
4 Other comments or any questions?

5 VICE CHAIR BOYD: Well, you having mentioned
6 legislation makes a good segue to the item I was going to
7 bring up. What I did not say when Avtar was talking, and I
8 probably should have is, as you all know, I have been working
9 on bioenergy for longer than I am willing to admit, certainly
10 the duration of the time I have been here, and of course the
11 Governor asked us to, in effect, recreate and reconstitute
12 what is called the Bioenergy Agency Working Group when he
13 commented on our Energy Action Plan for that subject, the
14 Bioenergy Action Plan, several years ago, and we have been
15 diligently working at this, it has been difficult because lots
16 of other agencies have received lots of other mandates to do
17 things like AB 32, etc. etc. This year, I am turning up the
18 heat, quite frankly, on the subject, mainly as I see light at
19 the end of the tunnel with regard to my term of office. One
20 of the assignments given to another agency who shall remain
21 anonymous many years ago was to solve one of the legal
22 problems that is the product of a statute that was passed
23 several years ago, precluding the use of lots of materials
24 that go to landfills from being used for energy production;
25 some of this, I believe, was a concern many years ago about

1 toxics -- Dioxin, Furans, from just incineration of garbage,
2 and that is what people have feared; secondly and thirdly, the
3 recycling folks and the composting folks who worked long and
4 hard to get programs launched are concerned about the
5 interdiction of any of the supplies going to landfills for
6 other purposes, so legislation that has precluded this use has
7 been seen as, first, an aid, but as years passed, an
8 impediment to making progress, and yet the agency in question
9 has failed repeatedly to get that legislation modified to
10 accommodate more bioenergy use. There is a piece of
11 legislation again before the Legislature, SB 222, we have had
12 more expressions of interest in this subject than I have seen
13 in a long time and, in that there is not that other agency in
14 existence anymore, I have taken it upon myself to pursue this
15 and I am pleased to say that we are getting a lot of
16 indications of support for this activity, including -- this
17 agency has had a support position on this bill, but I
18 reaffirmed that yesterday because I am seeking a multi-agency
19 letter of support from members of the Interagency Working
20 Group on this piece of legislation. So I just wanted you to
21 be aware of that, should you hear about it. Perhaps we can
22 accommodate all the people's concerns and yet get the statutes
23 modified such that some, particularly the cellulosic and green
24 waste materials, could be eligible in the future -- could be
25 used for future energy production. So, anyway, a positive

1 event seems to be occurring here.

2 CHAIRPERSON DOUGLAS: Good, well thank you.

3 Anything else?

4 COMMISSIONER BYRON: If I may, just two quick items.

5 One is, again, since you brought up legislation, as well, I
6 understand there was over 4,000 bills that did make it in
7 before the deadline last Friday, or the Friday before, I do
8 not recall, a lot of them affecting energy -- no where near a
9 record, I understand, but it is sometimes numbing to think how
10 much legislation there is sitting out there, including the re-
11 introduction of reorganization of energy in the state. I saw
12 that this time Assembly Member Villines has been joined by
13 Assembly Member Fuentes on the introduction of that bill, so I
14 think it is of interest to this Commission. I have had no
15 discussion with members or Governor's Office. Perhaps you
16 have, Madam Chair, and I hope you will keep this Commission
17 informed as the progress of that bill as it moves forward.
18 Second is our Public Advisor appealed to me last week with
19 regard to conducting evidentiary hearings for one of the ARRA
20 projects, namely the Imperial Valley Solar Project, as it is
21 now called, formerly SES 2, holding them on-site in, I
22 believe, El Centro; we were going to do it up here in an
23 effort to reduce cost, but also not to impact other siting
24 cases by pulling staff out. I was assured by the Deputy
25 Director of the Siting Transmission Environmental Division

1 that it will not have any impact, so I just want to let me
2 fellow Commissioners know that, you know, we will conduct
3 these kinds of hearings on-site if at all possible, interest
4 to the public was such that the Public Advisor felt that was
5 in the best interest of the public and we, of course, want to
6 meet that need. But I think we all know, it takes a
7 tremendous amount of resources if we have a number of
8 interveners, these things can go on, these evidentiary
9 hearings can go on for three, four, maybe -- I am sorry, two,
10 three, or maybe even four days. But as I have said, I have
11 been assured it will not impact the other projects. I
12 believe, Madam Chair, you are doing the same, as well, moving
13 one of your hearings down to the location.

14 CHAIRPERSON DOUGLAS: That is right, we moved the --
15 we decided to hold the Beacon evidentiary hearings in
16 California City. I would say that there are a number of
17 factors that you look at when you consider where to hold a
18 hearing, the amount of local interest is one, the extent to
19 which the issues that are actually being adjudicated are of
20 significant local interest is another one, and in the case in
21 question that we decided to move to California City, one of
22 the issues was of pretty serious or significant local
23 interest, and that was various alternatives for finding water
24 supplies. So those are some of the factors that we look at,
25 and at the same time, I do not think they will necessarily

1 weigh the same in all of the projects. And some of the
2 projects are in very remote locations and have significantly
3 less local interest. And I think we will also find, as the
4 ARRA projects that we are siting move through our process,
5 that there is going to be a time in which we have potentially
6 multiple evidentiary hearings going on at this agency, and we
7 will find it very very very difficult to handle, to handle it
8 just from a scheduling perspective. As you know, in our
9 process Commissioners must be at these hearings, and we like
10 to be at these hearings, and we like to have both Committee
11 members at these hearings when we possibly can. And we will
12 just find that the balance of these factors, when the
13 evidentiary hearings start to hit, and many of them look like
14 they will be hitting fairly close to each other temporally,
15 may weigh differently in different cases.

16 VICE CHAIR BOYD: Well, I have noticed on my
17 calendar that there are pre-hearing conferences on two cases
18 that I am involved with, that are being conducted the same
19 day, one in the morning and one in the afternoon. Should the
20 morning run -- I think I determined -- should the morning run
21 long, I will have to abandon my other Commissioner to that and
22 pick up the other one because I believe I am the Presiding
23 member of one, etc. etc. And we are probably going to have to
24 work out schedules, as you said, once in a while, maybe both
25 of us will not be able to make some of these hearings because

1 we are attending to another one, or calendar conflicts make it
2 that you want it to happen, so we will just make it happen.

3 CHAIRPERSON DOUGLAS: In fact, one of the costs of
4 moving the Beacon hearing to California City was, by not being
5 able to participate in the Palin Blythe status conference,
6 which Commissioner Weisenmiller will be doing on his own on
7 Monday, and it may or may not impact Commissioner Byron's
8 ability to be there -- it will impact Commissioner Byron's
9 ability to be there. So these are all issues that have to be
10 weighed and that have an impact.

11 COMMISSIONER WEISENMILLER: We also may see
12 budgetary issues. I know in Sunrise, Commissioner Greuneich
13 had committed that all the evidentiary hearings would be in
14 San Diego, and midway through that process there was one of
15 the budget freezes and the PUC had no travel funds, so the
16 hearings could not be held in San Diego, were shifted to San
17 Francisco, but they really amped up the audiovisual part, so
18 every hearing was telecast, webcast, you know, both audio and
19 video, to try to deal with it. But, as I said, it was
20 certainly the PUC's original intent to have them in San Diego,
21 and obviously that was controversial, there was a lot of
22 interest, but the budget effort just cut that off.

23 MS. JONES: I would just like to add that, to
24 address Commissioner Weisenmiller's issue, we are trying to
25 upgrade the audiovisual in Hearing Room B so that we can WebEx

1 from there, so that is something we are working on right now.

2 COMMISSIONER WEISENMILLER: I was also going to
3 suggest that, to the extent other state agencies might have
4 state-of-the-art audiovisual capability in Sacramento, that we
5 may be able to rent some or use some of those facilities.

6 MS. JONES: We will start looking at the CalEPA
7 Building, although they book it a lot.

8 VICE CHAIR BOYD: Very hard to get in there.

9 MS. JONES: And it is very hard to get into, but it
10 is a very good facility for doing hearings, so we will see if
11 we can grab any dates for that. But we will look at other
12 agencies, as well.

13 CHAIRPERSON DOUGLAS: Good, well, I think we might
14 be able to look forward to the day when we have Hearing Room A
15 and Hearing Room B, and possibly some other site in Sacramento
16 all going on siting cases at the rate at which we are going,
17 and that is a good thing, that shows that the cases are moving
18 through the system and that it is really imminently reaching a
19 point at which these cases get to evidentiary hearings now.

20 VICE CHAIR BOYD: I noticed last week -- I attended
21 the tail end of the ARB meeting because of one agenda item I
22 had been invited to participate with, and I noticed while
23 there, and Commissioner Eggert may have more familiarity, I
24 knew they had capability to have audio and video transmission,
25 but they seem to have an organization that had portable

1 cameras, and what have you that tended to facilitate coverage
2 of the hearing even more than I had seen before. So there may
3 be some possibilities if that ever becomes important to people
4 to see live video, as well as audio, of just the hearing and
5 the speakers, and what have you. It may be pricey; I would
6 presume it is, but --

7 COMMISSIONER EGGERT: I think that might be an
8 additional service of the facility there that they would
9 offer. I do not know if it extends beyond the facility,
10 though.

11 VICE CHAIR BOYD: I was just wondering if there were
12 companies out there who could come into this hearing room and,
13 if we were wired properly for that. Anyway, just --

14 COMMISSIONER WEISENMILLER: Certainly in Sunrise,
15 everything was video and, actually, the Applicant and the
16 Interveners tended to take clips from the video and post it on
17 their websites, sort of highlights of the cross examination.
18 Certainly you can do a lot of interesting things with the AV
19 side that we have not gotten to yet.

20 CHAIRPERSON DOUGLAS: Well, I think it would be very
21 worthwhile to look into the question of whether there is a
22 service like that, and what it costs. And I know there are
23 purchasing restrictions out there, and we will have to get
24 special dispensation to do that, and we may have already
25 gotten special dispensation just to upgrade the phone system

1 in, I think, third floor conference room to be able to have
2 effective status conferences, and so on, where people on the
3 phone can actually hear, and that is obviously critically
4 important, that people be able to hear. So I am sure there
5 are many hurdles to jump, even if this proves to be a viable
6 option, but it is certainly worth looking into.

7 VICE CHAIR BOYD: Good point. I am reminded that
8 last week I participated in a status conference in Conference
9 Room 3 for the first time and we had to make sure that we
10 passed the limited microphone around the room to make sure the
11 speakers could be heard, etc. etc., so hopefully there are
12 ways to get more, a system with more capacity to handle more
13 microphones, etc.

14 CHAIRPERSON DOUGLAS: I think that problem will be
15 solved. It took jumping through a few hoops to even be able
16 to do that.

17 VICE CHAIR BOYD: Isn't that a sad commentary,
18 though?

19 MS. JONES: I should just note that we did have
20 plans to upgrade Hearing Room A, and to upgrade and expand
21 Hearing Room B, but with Budget cuts, it was one of the things
22 that we had to defer. But we are trying to solve the
23 microphone problem in the fishbowls, in the conference rooms,
24 and we are trying to improve -- we have a plan to improve
25 Hearing Room B at this point.

1 COMMISSIONER EGGERT: Do we have the ability to
2 trade off our travel budget against better AV capabilities?

3 MS. JONES: Uh --

4 COMMISSIONER EGGERT: You could make the case at
5 least in some instances that it might be cheaper.

6 MS. JONES: We will take a look at it.

7 COMMISSIONER EGGERT: Okay.

8 CHAIRPERSON DOUGLAS: We may be setting records in
9 our travel budget and upgrading AV's, but it is worth looking
10 into and, in any case, any upgrades that are possible,
11 especially that sound system in the third floor conference
12 room, or anything that is relatively low cost, some kind of
13 service that Commissioner Boyd was referencing could be very
14 helpful. It is, I think, very helpful for the public to be
15 able to see, as well as hear, if that is a realistic option.
16 Anything else on this? Let's move on then.

17 Item 8. Chief Counsel's Report.

18 MR. BLEES: Nothing today, thank you.

19 CHAIRPERSON DOUGLAS: Thank you. Item 9. Executive
20 Director's Report.

21 MS. JONES: I just have one quick item I wanted to
22 let everyone know about, related to ARRA. On March 5th, which
23 is Friday, the House Committee on Oversight and Government
24 Reform will be holding a hearing on ARRA down in Los Angeles.
25 And the California Recovery Task Force, Herb Schultz will be

1 representing them. It will also include Laura Chick, the
2 Inspector General, Elaine Howell, the State Auditor, and a
3 number of others. There is a second panel of Mayors from Los
4 Angeles, San Bernardino, and San Jose, who will also testify
5 and that will be at 1:00 on Friday. Thank you.

6 CHAIRPERSON DOUGLAS: Thank you, Ms. Jones. Item
7 10. Public Adviser's Report.

8 MS. JENNINGS: Yes, I just want to thank the
9 Commissioners and the siting staff in the Hearing Office for
10 responding to my concerns regarding the public's involvement
11 in these remote desert projects, and the need to be accessible
12 to the public. These projects have been going on for a while,
13 they have been in some cases a year old, and because not many
14 people have intervened, I do not know that that should be the
15 sole determinant as far as whether you have it locally or in
16 Sacramento. And I would like you to know that I do have a
17 meeting scheduled with the IT staff for tomorrow to see
18 whether there is any possible options to use some of the free
19 systems that are on the Internet like Skype, there is another
20 one called OoVoo that allows you to have audiovisual, as well
21 as the recording. They had some concerns about how that would
22 interact with getting access to the State's Internet network,
23 and so we are going to try to go through some of those things
24 and they said they would evaluate them. So if that works,
25 that would be great because it would be no cost.

CERTIFICATE OF REPORTER

I, PETER PETTY, an Electronic Reporter, do hereby certify that I am a disinterested person herein; that I recorded the foregoing California Energy Commission Business Meeting; that it was thereafter transcribed into typewriting.

I further certify that I am not of counsel or attorney for any of the parties to said meeting, nor in any way interested in outcome of said meeting.

IN WITNESS WHEREOF, I have hereunto set my hand this 5 day of March, 2010.



PETER PETTY