

BUSINESS MEETING
BEFORE THE
CALIFORNIA ENERGY COMMISSION

DOCKET
DATE <u>MAR 10 2010</u>
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In the Matter of:)
)
Business Meeting)
_____)

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

WEDNESDAY, MARCH 10, 2010

10:00 A.M.

Reported by:
Peter Petty



ORIGINAL

COMMISSIONERS PRESENT

Karen Douglas, Chair
James D. Boyd, Vice Chair
Jeffrey D. Byron
Robert Weisenmiller

Staff Present:

Melissa Jones, Executive Director
Jonathan Bles, Chief Counsel
Jennifer Jennings, Public Advisor
Harriet Kallemeyn, Secretariat

	<u>Agenda Item</u>
Avtar Bining	2,3
Suzanne Garfield	4

I N D E X

	Page
Proceedings	4
Items	
1. CONSENT CALENDAR.	5
A. CALIFORNIA DEPARTMENT OF FISH AND GAME. Possible approval of Amendment 1 to Contract 500-08-010 for a 24-month no cost time extension with California Department of Fish and Game.	
B. FACET DECISION SYSTEMS, INC. Possible approval of Amendment 1 to Contract 500-09-030 for a 12-month no cost time extension with Facet Decision Systems, Inc.	
C. WESTERN ELECTRICITY COORDINATING COUNCIL. Possible approval of Amendment 1 to Contract 400-06-003 for a 12-month no cost time extension with Western Electricity Coordinating Council.	
2. UNIVERSITY OF CALIFORNIA, IRVINE NATIONAL FUEL CELL RESEARCH CENTER. Possible approval of Agreement PIR-09-018 for a grant of \$1,480,000 to the University of California, Irvine National Fuel Cell Research Center to develop and demonstrate a novel high-temperature fuel cell chiller for combined cooling, heating and power systems.	5
3. UNIVERSITY OF CALIFORNIA, IRVINE. Possible approval of Agreement PIR-09-013 for a grant of \$412,634 to the University of California, Irvine to develop control methods and technology for economical use of combined heat and power and combined cooling, heating and power systems.	8
4. CALIFORNIA REPORTING, LLC. Possible approval of Amendment 1 to Contract 180 08-001 with California Reporting, LLC, adding \$75,700 and a one-year time extension for court reporting services for the Energy Commission's Business Meetings, public workshops and other proceedings.	11

I N D E X

	Page
5. MINUTES: Approval of the March 3, 2010, Business Meeting Minutes.	12
6. COMMISSION COMMITTEE PRESENTATIONS AND DISCUSSION.	13
7. CHIEF COUNSEL'S REPORT.	14
8. EXECUTIVE DIRECTOR'S REPORT.	15
9. PUBLIC ADVISER'S REPORT.	15
11. PUBLIC COMMENT.	15
Adjournment	15
Certificate of Reporter	16

1 P R O C E E D I N G S

2 MARCH 10, 2010

10:00 a.m.

3 CHAIRPERSON DOUGLAS: Good morning. Welcome to the
4 California Energy Commission Business Meeting of March 10th,
5 2010.

6 Please join me in the Pledge.

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

9 CHAIRPERSON DOUGLAS: Item 1. Consent Calendar.

10 VICE CHAIR BOYD: Move approval.

11 COMMISSIONER BYRON: Second.

12 CHAIRPERSON DOUGLAS: All in favor?

13 (Ayes.)

14 Item 2. University of California Irvine National
15 Fuel Cell Research Center. Possible approval of Agreement
16 PIR-09-018 for a grant of \$1,480,000 to the University of
17 California Irvine National Fuel Cell Research Center. Mr.
18 Bining.

19 VICE CHAIR BOYD: Got a green light? See the word
20 "push?"

21 MR. BINING: Good morning, Commissioners and good
22 morning everybody here. This project is out of a combined
23 heat and power grant solicitation which was approved by the
24 RD&D Policy Committee in December 2008, to fund eight
25 projects, and this is one of those eight projects. This

1 project is with University of California Irvine, to develop
2 and demonstrate a high temperature fuel cell absorption
3 chiller combined cooling, heating and power system for air-
4 conditioning loads in buildings. This high temperature fuel
5 cell has the capability to provide clean power and at very
6 high efficiency. High temperature heat from this fuel cell
7 will be used in the absorption chiller to do cooling, and that
8 will reduce the demand on grid electricity and demand for the
9 transmission and distribution infrastructure.

10 The output of this system will be about 300 kilowatt
11 electricity and 40 tons of refrigeration. The installation of
12 this system will occur at a building which is called FlexTech
13 at UCI campus, and this design of this building is very unique
14 and it is being replicated at a number of other places
15 throughout California. So if this demonstration is
16 successful, this whole technology can be easily adapted to a
17 number of buildings, and this will provide improved efficiency
18 benefits, reduced emissions, especially of nitrogen oxides,
19 and ultimately will provide those benefits that we can get
20 from this kind of combined system.

21 The term of this project is 48 months, but hopefully
22 we will be able to complete this project within about 36
23 months, and we recommend approval of this item.

24 COMMISSIONER BYRON: Mr. Bining, a couple quick
25 questions. You may have said this and I apologize, what type

1 of fuel cell is it?

2 MR. BINING: This is molten carbonate fuel cell from
3 fuel cell energy.

4 COMMISSIONER BYRON: And any projections on the
5 overall energy efficiency of the combined heat and power?

6 MR. BINING: Yes. This system will have combined
7 efficiency of about 67 to 70 percent, and electrical
8 efficiency is about 47 percent.

9 COMMISSIONER BYRON: Well, they seem to be doing
10 very good work at UCI, and I note that this was one of your
11 proposals that was selected as part of the -- forgive me --
12 request for offers? Or request for proposals that you sent
13 out.

14 MR. BINING: Yes.

15 COMMISSIONER BYRON: And I am very interested in
16 this work. It is a significant project, \$1.4 million, and I
17 am very much in favor of seeing this kind of work done. I am
18 on the Stationary Fuel Cell Collaborative Advisory Committee,
19 unfortunately I cannot give it as much time as I would like,
20 but I am glad to see this research continues and I am
21 certainly in favor of this.

22 MR. BINING: Thank you very much.

23 COMMISSIONER BYRON: I will be glad to move it. I
24 move approval of Item 2.

25 VICE CHAIR BOYD: Second.

1 CHAIRPERSON DOUGLAS: All in favor?

2 (Ayes.)

3 Item 2 is approved.

4 VICE CHAIR BOYD: Excuse me, Avtar, how many more of
5 these -- there were eight and we did a couple last week.

6 MR. BINING: Yes, I have one more today.

7 VICE CHAIR BOYD: Will we be seeing you regularly
8 for a while?

9 MR. BINING: I have one more today that will reach
10 up to 50 percent milestone of these eight projects, so we will
11 bring four more.

12 VICE CHAIR BOYD: That was the answer I was looking
13 for.

14 CHAIRPERSON DOUGLAS: Very good. We will go to Item
15 3, then, University of California Irvine. Possible approval
16 of Agreement PIR-09-013 for a grant of \$412,634 to the
17 University of California Irvine. Mr. Bining, please tell us
18 about this one.

19 MR. BINING: Yes, this project is also from the same
20 grant solicitation and also approved by the RD&D Committee,
21 and one of those eight projects. This project focuses on the
22 economical disparage and dynamic load falling of both
23 electrical load and the thermal load in combined heat and
24 power systems. You have heard one project last time, but this
25 project is slightly different than the last project I

1 presented last week. In this case, the focus is more on the
2 dynamic optimization of the complete system. In this project,
3 again, University of California Irvine at National Fuel Cell
4 Research Center will take a standard combined heat and power
5 system such as a micro-turbine or a gas turbine, combine it
6 with a heat recovery system to use that raised heat for
7 heating/cooling purposes. Often, the problem with these
8 systems in the field is that there is not a proper matching of
9 the electrical load and the thermal load, and there is not
10 proper dynamic falling of those loads, and the system is not
11 running 24/7 under optimized conditions. If this system is
12 the way it is being proposed, if it gets developed based on
13 the physical models and then optimized to develop the complete
14 control matters* [7:09] which will ultimately translate into
15 hardware and software, and a complete control system that is
16 optimizing the combined heat and power system throughout its
17 cycle, not only on the daily cycle, but weekly, monthly, and
18 yearly cycle, this will improve the cost-effectiveness of
19 these combined heat and power systems. And the estimates are
20 that it will be 20 percent more cost-effective than the
21 systems that we have now. And this will also improve the
22 overall energy efficiency of the system; of course, it will
23 have reduced emissions because now it is being used under
24 optimized conditions all the time.

25 This project will start on a very small scale,

1 taking two or three microturbine emitters, develop those,
2 control algorithms, develop the hardware that can be tested
3 into lab conditions, but this can be used on all kinds of CHP
4 systems up to about 5 megawatt. And we have a very
5 significant partner in this, Siemens Corporate Research, and
6 they are providing a good amount of technical know-how and
7 expertise to develop this system and UCI will test that
8 system, develop that system, then demonstrate that system at
9 UCI campus. And if this is successful, then Siemens will be
10 able to commercialize it very quickly.

11 COMMISSIONER BYRON: No real questions, just a
12 comment, Mr. Bining. I think this looks very good, very
13 interesting, as well. Obviously, control technology is
14 extremely important, and a 20 percent improvement in
15 efficiency, if that were to be achieved, would be astounding,
16 so I will move this item, as well.

17 VICE CHAIR BOYD: I will second it with only the
18 comment, with all this good work we are doing in CHP, CCHP, we
19 still need better policy implementation of this agency's
20 desire to see that technology more widely used in the field,
21 but we will press on, IEPR notwithstanding.

22 CHAIRPERSON DOUGLAS: Absolutely. All right, we
23 have a motion and a second. All in favor?

24 (Ayes.)

25 This item is approved. Thank you.

1 MR. BINING: Thank you very much.

2 CHAIRPERSON DOUGLAS: Item 4. California Reporting,
3 LLC. Possible approval of Amendment 1 to Contract 180-08-001
4 with California Reporting, LLC, adding \$75,700 and a one-year
5 time extension for court reporting services for the Energy
6 Commission's Business Meetings, public workshops, and other
7 proceedings. Ms. Garfield.

8 MS. GARFIELD: Good morning, Commissioners, thank
9 you. This is Suzanne Garfield, Media and Communications
10 Office. As you said, we are asking for an extension and
11 \$75,700 amendment to this contract. I would like to note that
12 the reason we are asking this is, currently the Department of
13 General Services is doing specifications for the Master
14 Service Agreement and these should be ready next year. At
15 that time, we will go out and request a bid for a three-year
16 contract for Court Reporting services. Do you have any
17 questions?

18 COMMISSIONER BYRON: Ms. Garfield, we have a very
19 busy year, it seems we have gotten to know all of our Court
20 Reporters on a personal basis, we spend so much time with
21 them. Are we talking too much up here?

22 MS. GARFIELD: Well, it depends if you are the Court
23 Reporter who gets paid by the page, or if you are the
24 Commission who is paying by the page, so it is up to you,
25 Commissioner.

1 COMMISSIONER BYRON: A more serious question. I
2 mean, some of our evidentiary hearings, the number of
3 caseloads, all of this is really extending the amount of time
4 that we are doing reporting. I will bet you the page number
5 has increased substantially, so I assume this will get us
6 through the year?

7 MS. GARFIELD: We have estimated and we feel that
8 this will move us through the entire year. Yes, thank you.

9 COMMISSIONER BYRON: Okay.

10 VICE CHAIR BOYD: Some of us are measuring our words
11 carefully of late.

12 COMMISSIONER BYRON: I would move approval of Item
13 4.

14 VICE CHAIR BOYD: Second.

15 CHAIRPERSON DOUGLAS: All in favor?

16 (Ayes.)

17 Item 4 is approved. Thank you, Ms. Garfield.

18 MS. GARFIELD: Thank you, Commissioners.

19 CHAIRPERSON DOUGLAS: Item 5. Minutes. Approval of
20 the March 3rd, 2010 Business Meeting Minutes.

21 VICE CHAIR BOYD: I move approval.

22 COMMISSIONER BYRON: Second.

23 CHAIRPERSON DOUGLAS: All in favor?

24 (Ayes.)

25 The Minutes are approved.

1 Item 6. Is there any Commission Committee
2 presentations or discussion?

3 VICE CHAIR BOYD: Not today, I am trying to see if
4 we will set the record today.

5 CHAIRPERSON DOUGLAS: We very well may.

6 COMMISSIONER BYRON: I think the record is still
7 going to be set, but I have to note for the record, we were
8 all seen last night at a wonderful event recognizing one of
9 our former Commissioners and colleagues, Dr. Art Rosenfield,
10 at a symposium at University of California at Davis. And it
11 was certainly an extraordinary event. I know I was very
12 pleased to be there and to be included and to see one of our
13 colleagues be recognized at that level was just astounding.
14 And I think you all may know that there is a new measure now
15 in the world, a "Rosenfeld" has been established in a
16 technical paper, and we have all been encouraged to use it on
17 a regular basis --

18 VICE CHAIR BOYD: I was going to make a motion to
19 that effect, half facetiously, that we kind of made an
20 obligation last night to join the scientific world and to
21 utilize the "Rosenfeld" in the future. This was no joke, this
22 was a scientific paper, printed in a peer reviewed scientific
23 journal, authored by 50 peers of Art's, that created the
24 "Rosenfeld" as a measure of energy efficiency. And you will
25 all get the formula and the test some time in the future, but

1 I guess we should go out of our way to make sure that we read
2 about it.

3 COMMISSIONER BYRON: Absolutely. In fact, there
4 were presentations that included picorosenfelds in them
5 yesterday and stuff, but anyhow, I just wanted to make note of
6 that, it was an extraordinary event.

7 CHAIRPERSON DOUGLAS: It certainly was, Commissioner
8 Byron, and it was wonderful for all of us to take part in it
9 and to watch our colleague be honored in that way. So thank
10 you for raising that.

11 VICE CHAIR BOYD: I am still awestruck by the fact
12 there were 400 people in the audience for this symposium
13 yesterday.

14 CHAIRPERSON DOUGLAS: And I am still impressed by
15 the fact that Art managed to give the presentation on cool
16 roofs in the last panel presentation.

17 VICE CHAIR BOYD: Keeping with the tradition of
18 defying what he is told to do and doing what he wants to do,
19 historically.

20 CHAIRPERSON DOUGLAS: Absolutely. All right, moving
21 on, is there a Chief Counsel's Report today?

22 MR. BLEES: No report, but I do request a short
23 closed session to discuss potential litigation.

24 VICE CHAIR BOYD: There goes the record.

25 CHAIRPERSON DOUGLAS: Item 8. Executive Director's

1 Report.

2 MS. JONES: I have a very brief report this morning.
3 The Cash For Appliances Rebate Program was launched yesterday.
4 Chairman Douglas kicked off the California Cash for Appliances
5 Rebate Program through a WebEx that we thought was very
6 successful, and we got some very good media coverage on it. I
7 would like to thank Suzanne Garfield and her media team for
8 developing the logo and for the program presentation
9 yesterday. So, thank you.

10 CHAIRPERSON DOUGLAS: Thank you for raising that,
11 Ms. Jones, and to be clear, it was an announcement of a
12 launch, and the program will go live on Earth Day. Is there a
13 Public Advisor's Report today?

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

15 CHAIRPERSON DOUGLAS: Thank you. Is there public
16 comment? Very well, we will adjourn this and we will move to
17 Executive Session.

18 (Whereupon, at 10:15 a.m., the business meeting was
19 adjourned.)

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REPORTER'S CERTIFICATE

I do hereby certify that the testimony in the foregoing hearing was taken at the time and place therein stated; that the testimony of said witnesses were reported by me, a certified electronic court reporter and a disinterested person, and was under my supervision thereafter transcribed into typewriting.

And I further certify that I am not of counsel or attorney for either or any of the parties to said hearing nor in any way interested in the outcome of the cause named in said caption.

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

PETER PETTY
CER**D-493