

BUSINESS MEETING  
BEFORE THE  
CALIFORNIA ENERGY RESOURCES CONSERVATION  
AND DEVELOPMENT COMMISSION

In the Matter of:                    )  
                                          )  
Business Meeting                    )  
                                          )  
\_\_\_\_\_                              )

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

WEDNESDAY, NOVEMBER 16, 2005

11:37 A.M.

Reported by:  
Peter Petty  
Contract No. 150-04-001

COMMISSIONERS PRESENT

Joseph Desmond, Chairperson

John L. Geesman

Jackalyne Pfannenstiel

STAFF PRESENT

Scott Matthews, Acting Executive Director

William Chamberlain, Chief Counsel

Alec Jenkins

Elizabeth Shirakh

Virginia Lew

Mike Trujillo

Irene Salazar

Dottie Horgan

PUBLIC ADVISER

Nick Bartsch

ALSO PRESENT

Vincent Schwent  
Spectrum Energy, Inc.

Alfred Bulf  
PeakOil.net

## I N D E X

	Page
Proceedings	1
Items	1
1 Consent Calendar	1
2 Trustees California State University	1
3 Existing Renewable Facilities Program Guidebook - moved to 11/30/05	6
4 Paradise Unified School District	7
5 Anderson Union High School District	9
6 Department of General Services	11
7 Robert Bosch Corporation	13
8 Building Industry Institute	14
9 Minutes	20
10 Commission Committee and Oversight	21
11 Chief Counsel's Report	21
12 Executive Director's Report	22
13 Legislative Director's Report	22
14 Public Adviser's Report	22
15 Public Comment	22
Alfred Bulf, PeakOil.net	22
Adjournment	27
Certificate of Reporter	28

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

2 11:33 a.m.

3 (Whereupon the Pledge of Allegiance was  
4 recited in unison.)5 CHAIRPERSON DESMOND: Thank you for  
6 being here, and please accept my apologies for the  
7 unexpected delay of an a hour and a half,  
8 originally set to begin at 10:00. But we'll jump  
9 right into the agenda here and get moving.10 First item on the agenda, item number 1  
11 is the consent calendar with Commission  
12 cosponsorship for WestStart, as well as  
13 cosponsorship of another project.14 COMMISSIONER PFANNENSTIEL: I'll move  
15 the consent calendar.

16 COMMISSIONER GEESMAN: Second.

17 CHAIRPERSON DESMOND: All those in  
18 favor?

19 (Ayes.)

20 CHAIRPERSON DESMOND: Opposed? So  
21 moved.22 Item number 2, the Trustees of the  
23 California State University system. Possible  
24 approval of \$748,706 for the ten highest scoring  
25 grant applications under the most recent

1 solicitation cycle 04-03 of the Energy Innovations  
2 Small Grant Program.

3 I would note a change, and that is  
4 agenda item, or I should say project item  
5 number --

6 MR. JENKINS: Six.

7 CHAIRPERSON DESMOND: -- 6, thank you,  
8 Mr. Jenkins, will not be up for approval. And in  
9 that case we are reducing the total proposed  
10 awards for the remaining nine projects at  
11 \$674,409.

12 So, please go ahead.

13 MR. JENKINS: Good morning, Mr.  
14 Chairman. I'm Alec Jenkins. Good morning,  
15 Commissioners. I manage the Energy Innovations  
16 Small Grant Program.

17 Thank you, Mr. Chairman, for covering  
18 the item that you just did, because then I don't  
19 have to.

20 The purpose of the small grants program  
21 is to fund and test the feasibility of new  
22 concepts that if proven feasible would be of value  
23 to the people of California. And therefore it is  
24 important that we fund simply new concepts.

25 The nine remaining recommended projects

1        were selected from 53 grant applications received  
2        to the solicitation. There are in these nine five  
3        PV-related projects, three that related to  
4        distributed generation. And the remaining concept  
5        is a lighting efficiency concept.

6                In terms of applicants, five  
7        technologies were offered by the academic  
8        community and four by small businesses.

9                The total funding requested for the nine  
10       projects is \$674,409. I recommended that these  
11       nine projects be considered by the Commission and  
12       approved.

13               CHAIRPERSON DESMOND: Thank you.

14       Questions or comments?

15               COMMISSIONER GEESMAN: I'll move the  
16       item.

17               COMMISSIONER PFANNENSTIEL: I just have  
18       a couple questions. Mr. Jenkins, the write-up  
19       says that there have been 187 awards to date under  
20       this program.

21               Do you have any idea of how many of  
22       those, or what percentage of those might have gone  
23       into commercialization?

24               MR. JENKINS: I do know that 45 percent  
25       of the projects, of course they're projects that

1 are being managed from previous grant awards -- 45  
2 percent of the full count of projects that have  
3 received awards have achieved follow-on funding,  
4 which is my measure of the taking the next steps  
5 to commercialization.

6 Some of those projects leapfrogged  
7 beyond concept feasibility almost directly to  
8 commercialization. Others obtained follow-on  
9 funding for various sources; some from the  
10 Commission, but most from other sources.

11 So that's my measure of the success of  
12 the program. And in total dollars, we have issued  
13 \$7.4 million in grants; and the follow-on funding  
14 now amounts to about 84 million. So it's over a  
15 10-to-1 ratio.

16 COMMISSIONER PFANNENSTIEL: Right. But  
17 it would be interesting to see how many actually  
18 become commercially viable projects.

19 MR. JENKINS: I'd be glad to look into  
20 that and give you a number.

21 COMMISSIONER PFANNENSTIEL: Then the  
22 other question really gets to where this program  
23 fits into the overall PIER funding. It appears  
24 that there's something like, you know, nearly  
25 750,000 or a little less now with that one project

1 out on this cycle.

2 What is your annual budget for this  
3 program? And where is it relative to the overall  
4 PIER priorities?

5 MR. JENKINS: Yes, I'd be glad to answer  
6 that. Recently the Commission approved amendment  
7 number 4 to the small grants program, which  
8 included 3.5 million a year for the PIER portion  
9 of the small grants program. And a million for  
10 one year only for the natural gas side of the  
11 small grants program. That's our kickoff of the  
12 natural gas research program.

13 The 3.5 million for each two years' PIER  
14 funding for the small grants program is a part of  
15 the 62 million a year PIER funding. So that's the  
16 comparative measure.

17 COMMISSIONER PFANNENSTIEL: Thank you.

18 CHAIRPERSON DESMOND: Just had a quick  
19 follow-up question, as well. Given that we are  
20 approving nine projects and we have budgeted for  
21 ten, will you be coming back to this Commission  
22 with a recommendation on the next project in line  
23 based on its ranking?

24 MR. JENKINS: My preference, Chairman  
25 Desmond, is to let that fall back into the pool of

1 funding that's available in the program for the  
2 remaining cycles of solicitation. Because then  
3 it's -- we simply recycle those funds in the sense  
4 that they'll be then available for new awards.

5 I was not recommending going back and  
6 picking lower scoring awards for this cycle. And  
7 that is really a personal decision.

8 COMMISSIONER PFANNENSTIEL: Mr.  
9 Chairman, I'll second the motion on this item.

10 CHAIRPERSON DESMOND: Okay.

11 All those in favor?

12 (Ayes.)

13 CHAIRPERSON DESMOND: Opposed? So  
14 moved. Thank you, Mr. Jenkins.

15 MR. JENKINS: Thank you.

16 CHAIRPERSON DESMOND: Agenda item number  
17 3. I believe this is Existing Renewables Program  
18 Guidebook.

19 ACTING EXECUTIVE DIRECTOR MATTHEWS:

20 That item's been put over --

21 CHAIRPERSON DESMOND: Has it been moved  
22 and put over? Okay.

23 ACTING EXECUTIVE DIRECTOR MATTHEWS: --  
24 to November 30th.

25 CHAIRPERSON DESMOND: All right.

1 November 30th?

2 ACTING EXECUTIVE DIRECTOR MATTHEWS:

3 Yes.

4 CHAIRPERSON DESMOND: Item number 4 is  
5 the Paradise Unified School District. Possible  
6 approval of a loan for \$341,677 to upgrade the  
7 lighting systems. Project estimates to save about  
8 34,865 annually with a simple payback of 9.8  
9 years. Ms. Shirakh.

10 MS. SHIRAKH: Good morning. My name is  
11 Elizabeth Shirakh. And today, for your  
12 consideration, we have a proposed loan for  
13 \$341,677 with Paradise Unified School District to  
14 install energy efficient lighting.

15 These measures include mostly the  
16 installation of T8 lamps with instant start  
17 electronic ballasts.

18 In 1996 the District installed the  
19 current lighting system of first generation T8  
20 lamps and electronic ballasts. As T8 lighting  
21 technology has advanced in recent years, the  
22 District is now retrofitting to the highest  
23 efficiency T8 technology currently available.

24 Other lighting projects covered under  
25 this loan package include the installation of T5

1 high output lamps, LED exit signs and high  
2 pressure sodium floodlights.

3 This project is estimated to save the  
4 District \$34,865 annually and have a simple  
5 payback of 9.8 years.

6 The total project cost is \$379,600. The  
7 school district and PG&E rebates will cover the  
8 project cost difference of nearly 38,000.

9 The Commission Staff has reviewed the  
10 project and believes it's both technically and  
11 economically feasible; meets the loan program  
12 requirements; and recommends approval of the loan.

13 The loan funds will come from the Energy  
14 Conservation Assistance Act, ECAA, or bond funds.  
15 And the interest rate is 4.5 percent. And this  
16 item was approved by the Efficiency Committee on  
17 November 2, 2005.

18 CHAIRPERSON DESMOND: Questions or  
19 comments?

20 COMMISSIONER PFANNENSTIEL: Mr.  
21 Chairman, I would move the item.

22 COMMISSIONER GEESMAN: Second.

23 CHAIRPERSON DESMOND: All those in  
24 favor?

25 (Ayes.)

1                   CHAIRPERSON DESMOND: Opposed? So  
2 moved. Thank you.

3                   MS. SHIRAKH: Thank you.

4                   CHAIRPERSON DESMOND: Next item is the  
5 Anderson Union High School District. Possible  
6 approval of a \$1,160,000 loan to install a 245 kW  
7 photovoltaic system, a dedicated chiller, energy  
8 efficient lighting and controls. Again, annual  
9 savings estimated at \$118,000, and a simple  
10 payback of 9.8 years. Ms. Lew.

11                   MS. LEW: Thank you. Good morning,  
12 Commissioners. My name is Virginia Lew from the  
13 Public Programs Office, and I'm representing  
14 Joseph Wang on this item.

15                   Anderson Union High School District,  
16 located in Cottonwood is requesting a loan for  
17 \$1,160,000 to implement various energy cost-saving  
18 improvements at West Valley High School.

19                   The loan will be used to install a 245  
20 kW photovoltaic system, a dedicated 40 ton chiller  
21 for the administration building, energy efficient  
22 lighting and controls throughout the campus, and  
23 to recommission the school's existing energy  
24 management system.

25                   To maximize the energy cost savings the

1 school will switch from PG&E's A10 demand to A6  
2 time-of-use rate schedules.

3 The projects will save about \$118,333  
4 annually in energy costs, with an average simple  
5 payback of 9.8 years.

6 The District is anticipating a rebate of  
7 about \$857,500 from the self generation incentive  
8 program. The District's loan request has been  
9 approved by the Efficiency Committee. And staff  
10 recommends approval of the loan.

11 I'll be happy --

12 CHAIRPERSON DESMOND: Okay. I have on  
13 the line a speaker in support of the project, Mr.  
14 Vincent Schwent of Spectrum Energy. Oh, you're  
15 present, thank you.

16 DR. SCHWENT: Thank you, Commissioners.  
17 Just wanted to thank the staff and the consultants  
18 to the Energy Commission for their help in this,  
19 in preparing this loan application. We think it's  
20 a great program; we're excited about it. And we  
21 hope to be back to you with more loan applications  
22 in the future.

23 CHAIRPERSON DESMOND: Thank you.

24 COMMISSIONER PFANNENSTIEL: Mr.

25 Chairman, I will move the project, but before I do

1 I just want to get a clarification on the record  
2 on this.

3 You talked about, Virginia, the \$1.1  
4 million loan. And that there's a PV system that  
5 this loan will be used to purchase. But there's  
6 also an \$800,000 rebate from PG&E for the purpose  
7 of the system. Is the 800,000 included in the  
8 \$1.1 million loan?

9 MS. LEW: No, it isn't.

10 COMMISSIONER PFANNENSTIEL: Okay, so  
11 that's in addition. So the savings is simply  
12 based on our loan amount?

13 MS. LEW: Correct.

14 COMMISSIONER PFANNENSTIEL: Thank you.  
15 So, with that, I'll move the item.

16 COMMISSIONER GEESMAN: Second.

17 CHAIRPERSON DESMOND: All those in  
18 favor?

19 (Ayes.)

20 CHAIRPERSON DESMOND: Opposed? So  
21 moved. Thank you, Ms. Lew.

22 MS. LEW: Thank you.

23 CHAIRPERSON DESMOND: Item number 6,  
24 Department of General Services. Possible approval  
25 of an interagency agreement 600-05-003 with DGS to

1 operate a Ford hydrogen fuel cell vehicle for  
2 demonstration purposes within the Sacramento area.  
3 Mr. Folkman.

4 MR. TRUJILLO: Good morning; I'm Mike  
5 Trujillo; I'll be presenting --

6 CHAIRPERSON DESMOND: Oh, sorry.

7 MR. TRUJILLO: -- this on behalf of Jim  
8 Folkman. What we're seeking today is approval of  
9 an interagency agreement between ourselves and  
10 General Services for the use of one fuel cell Ford  
11 vehicle for a period of three years.

12 Currently the vehicle is received under  
13 contract with General Services ARB and Ford Motor  
14 Company. And there are three vehicles in  
15 California. We would have the use of one of these  
16 vehicles for a period of three years to operate  
17 and see what kind of data collection will be  
18 furnished to Ford, and also outreach programs at  
19 the Energy Commission, Ford and ARB and DGS would  
20 have for the public.

21 So, we're seeking approval of this  
22 interagency agreement.

23 COMMISSIONER PFANNENSTIEL: I move the  
24 item.

25 COMMISSIONER GEESMAN: Second.

1 CHAIRPERSON DESMOND: All those in  
2 favor?

3 (Ayes.)

4 CHAIRPERSON DESMOND: Opposed? So  
5 moved.

6 MR. TRUJILLO: Thank you.

7 CHAIRPERSON DESMOND: Thank you. Item  
8 number 7, Robert Bosch Corporation. Possible  
9 approval of contract 600-05-004 for an MOU with  
10 Robert Bosch Corporation, which has offered to  
11 loan up to 14 advanced low-emission, high-  
12 efficient, light-duty diesel vehicles at no cost  
13 to the Commission for up to one year. Ms.  
14 Salazar.

15 MS. SALAZAR: Thank you, Mr. Chairman  
16 and Commissioners. My name is Irene Salazar from  
17 the Transportation Fuels Office here at the  
18 California Energy Commission.

19 This demonstration with Bosch will  
20 provide an evaluation of improvements made to  
21 diesel engine technology to address fuel economy,  
22 emissions and drivers' acceptance.

23 The vehicles produced by a variety of  
24 auto manufacturers all use advanced diesel fuel  
25 injection systems made by Bosch. The Energy

1 Commission will receive up to 14 different cars to  
2 evaluate over a one-year period.

3 I would also like to mention that just  
4 yesterday, Bosch and their corporate partner,  
5 Siemens, received Germany's 2005 Future Prize for  
6 the development of PZEV injections technology for  
7 use in diesel and gasoline engines. This  
8 technology could significantly improve vehicle  
9 fuel economy.

10 I would be glad to respond to any  
11 questions. Also, Mr. Tom Folks, a representative  
12 from Bosch is also here.

13 CHAIRPERSON DESMOND: Thank you.

14 Questions or comments from --

15 COMMISSIONER PFANNENSTIEL: Mr.

16 Chairman, I would move this item.

17 COMMISSIONER GEESMAN: Second.

18 CHAIRPERSON DESMOND: All those in  
19 favor?

20 (Ayes.)

21 CHAIRPERSON DESMOND: Opposed? So  
22 moved.

23 MS. SALAZAR: Thank you.

24 CHAIRPERSON DESMOND: Thank you.

25 Item number 8, Building Industry

1 Institute. Possible approval of contract 400-05-  
2 009 to the Building Industry Institute for  
3 \$154,607 to develop and conduct classroom training  
4 and web-based seminars on the 2005 building energy  
5 efficiency standards for residential production  
6 builders and local building departments. Ms.  
7 Horgan.

8 MS. HORGAN: Hi, I'm Dottie Horgan with  
9 the Buildings and Appliances Office. Staff is  
10 seeking approval of a \$154,607 contract with the  
11 Building Industry Institute to provide building  
12 energy code training through web-based seminars,  
13 often called webinars.

14 In April of this year staff received  
15 approval from the Efficiency Committee to submit a  
16 proposal to the Department of Energy for the 2005  
17 codes and standards grant funding for building  
18 industry training.

19 In September we received notice that the  
20 proposal was successful, and we were awarded grant  
21 funding.

22 Under the management of the Commission  
23 and in partnership with the Building Industry  
24 Institute and CBIA, classroom training and web-  
25 based seminars on the 2005 building energy

1 efficiency standards will be developed and  
2 conducted for the residential building community  
3 of medium- to large-production builders,  
4 subcontractors, building departments and  
5 architects.

6 It is anticipated that this training  
7 will accomplish a 13 percent market penetration in  
8 California, and involve at least 128 building  
9 community participants through two classroom  
10 training and 16 web-based training seminars.

11 The 2005 standards, which went into  
12 effect October 1, 2005, made significant changes  
13 to residential mandatory measures, prescriptive  
14 packages and performance calculations. Therefore,  
15 to improve compliance and achieve the energy  
16 savings intended for the 2005 standards, the  
17 building community needs training on these key  
18 changes.

19 Classroom training and webinars are  
20 chosen for training due to the increased audience  
21 potentially available through this medium, along  
22 with the opportunity for the community to view the  
23 training online at their own convenience.

24 Webinars have a distinct advantage over  
25 the Commission's web use -- sorry -- Commission's

1 use of web access of offering live feeds from the  
2 contractors' offices to the 16 web-based seminars  
3 that allow participants to actively interact with  
4 the instructor, view all materials or videos being  
5 used in the training, watch any demonstrations and  
6 view examples or samples.

7 Another important part of each webinar  
8 classroom training will be builder-specific,  
9 person-to-person on-site training to field  
10 personnel directly responsible for the quality and  
11 energy efficiency of construction.

12 Also a recorded classroom session along  
13 with frequently asked questions and the training  
14 materials will be available on the Commission  
15 website to be viewed at any time.

16 The Energy Commission's information  
17 technology services branch reviewed this and has  
18 signed off on the contract. And staff asks for  
19 your vote of approval for this contract.

20 CHAIRPERSON DESMOND: Questions or  
21 comments?

22 COMMISSIONER PFANNENSTIEL: Mr.  
23 Chairman, I move approval.

24 COMMISSIONER GEESMAN: Second.

25 CHAIRPERSON DESMOND: Okay. Before I

1 call for the vote I actually have a couple  
2 questions.

3 When I originally read this it wasn't  
4 clear to me that the contractor was making use of  
5 the Energy Commission's web-X, because it refers  
6 to limitation of no more than ten participants in  
7 any existing online seminar.

8 And so the question I would first ask is  
9 are we modifying this contract values change if  
10 the Energy Commission's now providing the use of  
11 its IT services, which are originally embedded in  
12 the first contract? Or is there a reason why it's  
13 limited to ten?

14 MS. HORGAN: Well, of the 16 web-based  
15 webinars that will be offered, they can take up to  
16 ten computers. And there could be one to two  
17 people at each computer.

18 Web-X, I understand, is a service  
19 provided. It's not necessarily a process. And  
20 the difference is that the contractor is going to  
21 do the 16 web-based seminars from their offices.

22 CHAIRPERSON DESMOND: But I thought you  
23 were indicating they were making use of the Energy  
24 Commission's Web-X system. Is that not the case?

25 MS. HORGAN: No. No, they're not.

1                   CHAIRPERSON DESMOND: Okay. then let me  
2 shift the question, which is, given that it's  
3 limited to only ten at a time, based on the  
4 services they've included in the proposal, and the  
5 system that the Commission has here can support  
6 several hundred people at a time -- I'm not  
7 expecting that you're going to have 200 people --  
8 have you considered or explored the option of  
9 making use of the Commission's resources through  
10 its existing Web-X contract as part of this  
11 project to enable greater participation?

12                   MS. HORGAN: I spoke to the contractor  
13 about a half an hour ago. They have not looked  
14 into using the Commission's Web-X. The main  
15 reason for that is they plan to do the 16 web-  
16 based seminars from their offices in Stockton. So  
17 it saves the travel time and the set up wear and  
18 tear on the trainers.

19                   CHAIRPERSON DESMOND: Okay, but you  
20 understand that they can still do that from their  
21 offices in Stockton, making use of the software?

22                   MS. HORGAN: Yes. They told me that  
23 Web-X is a potential, it's a company, a service  
24 provider that they would consider Web-X. They  
25 haven't signed with a sub on this yet.

1                   CHAIRPERSON DESMOND: Okay. I'm not  
2                   sure that you're understanding the question, or  
3                   maybe I'm not clarifying. But what I'm saying is  
4                   that the services that the Commission has  
5                   available, that could be made available to its  
6                   contractors, allows them to do all those and  
7                   handle more than ten connections at a time.

8                   And so all I'm asking is that when you  
9                   go back, consider looking at whether or not they  
10                  could make use of that to expand the potential  
11                  number of attendees at any one of the 16 sessions,  
12                  so that we're not limited to no more than 160 that  
13                  are being proposed here.

14                  MS. HORGAN: Yes, I will talk to the  
15                  contractor.

16                  CHAIRPERSON DESMOND: Thank you. Okay,  
17                  with that I'll call for the vote.

18                  All those in favor?

19                  (Ayes.)

20                  CHAIRPERSON DESMOND: Opposed? So  
21                  moved. Thank you.

22                  MS. HORGAN: Thank you.

23                  CHAIRPERSON DESMOND: Item number 9,  
24                  minutes from the November 3rd business meeting.

25                  COMMISSIONER GEESMAN: I'll move the

1 minutes.

2 COMMISSIONER PFANNENSTIEL: Second.

3 CHAIRPERSON DESMOND: All those in  
4 favor?

5 (Ayes.)

6 CHAIRPERSON DESMOND: Opposed? So  
7 moved.

8 Number 10, I don't think we have  
9 anything on Commission Committee and Oversight.

10 Item number 11, Mr. Chamberlain.

11 MR. CHAMBERLAIN: Yes. Mr. Chairman,  
12 I'm very pleased to introduce to the Commission  
13 the newest member of my office, Ken Glick. Ken  
14 comes to us from the Electricity Oversight Board.  
15 He has long-standing experience in FERC  
16 proceedings and in the natural gas industry. And  
17 I think he'll make a very strong addition to our  
18 office and to the Commission.

19 In addition, I have a brief item for  
20 closed session involving a litigation matter.

21 CHAIRPERSON DESMOND: Thank you. I will  
22 hold off on the closed session until we go through  
23 the remaining Executive Director's report and the  
24 other items, and that will end that.

25 Now we do have one individual who would

1 like to make some comment here at the public  
2 comments, Alfred Bulf from PeakOil.net.

3 So, before I get to that, let's go to  
4 Mr. Matthews.

5 ACTING EXECUTIVE DIRECTOR MATTHEWS:

6 Yes. I'm here because B.B. is chaperoning a group  
7 of eight-year-olds learning how to be a gold miner  
8 up in Coloma. Although we did discover this  
9 morning you can reach him by phone, but it was  
10 challenging.

11 Other than that I have no report. The  
12 Leg Director asked me to tell you that she has no  
13 report, either.

14 CHAIRPERSON DESMOND: Okay. Thank you.  
15 Moving on, Public Adviser's Office.

16 MR. BARTSCH: Mr. Chairman, Members,  
17 Nick Bartsch representing Margret Kim. Nothing  
18 new to report.

19 CHAIRPERSON DESMOND: Thank you. So at  
20 this time let me ask Mr. Bulf, is he present here?  
21 Thank you. You're with PeakOil.net?

22 MR. BULF: Yes, Mr. Chairman and  
23 Commissioners. My name is Al Bulf from  
24 PeakOil.net. We're a group that looks into rail  
25 electrification and energy issues.

1           And I believe the state is too much  
2           dependent on natural gas. And I applaud your  
3           program on renewables, however I believe, being a  
4           member of the nuclear industry, from the nuclear  
5           Navy, I believe that the state is making a wrong  
6           direction about nuclear power.

7           I believe that we should go back to  
8           nuclear power, and the state should build its own  
9           power plants and have reprocessing facilities to  
10          reprocess that spent fuel. I've been to  
11          reprocessing facilities for the Navy and a  
12          commercial one in Morris, Illinois, run by GE at  
13          the time.

14          And it's a viable technology. And with  
15          the new reactors coming online now, particularly  
16          in many other countries, if anybody has a Nokia  
17          phone, which is made in Finland, the Finns are  
18          building a 1600 megawatt reactor, and that'll be  
19          their number five. And they're planning a number  
20          six.

21          And I don't think we should fall behind  
22          the eight ball. This state we live in, and I'm a  
23          native Californian and proud of it, is a super-  
24          state. Everybody in the world looks to us. We  
25          have fallen behind on our energy dependency

1       because of our energy dependency on natural gas  
2       and buying out-of-state blocks of power.

3               I know, I work for a utility,  
4       unfortunately that threw away their nuclear power  
5       plant. And now they regret it. And we need to  
6       bring back -- I know the state has three laws that  
7       are on the books that prohibit nuclear power in  
8       the state. Well, those are obsolete, and the  
9       people that made them were very misinformed, to  
10      say the least.

11              And I believe that California has to go  
12      back and take nuclear power in stride and build  
13      these power plants, not only for power, but also  
14      for water. And I know the Governor is very high  
15      on the hydrogen highway. Well, at the end of that  
16      hydrogen highway is a nuclear power plant.

17              I know at Rancho Seco we used to gas off  
18      our hydrogen. And in the Navy we did the same  
19      thing. And the government now is spending over a  
20      billion dollars to build a hydrogen enhanced  
21      reactor in the Idaho desert where I used to be  
22      stationed. And other countries are even ahead of  
23      us in that, particularly China, with their pebble-  
24      bed reactor.

25              We need to go into that technology if we

1 want to be less dependent on oil and diesel, the  
2 diesel fuel that powers our transportation in the  
3 state. We use about 15 billion gallons a year of  
4 diesel and gasoline in the state. And if we are  
5 to make some kind of mark into that, we have to  
6 have hydrogen on prodigious quantities.

7 And the only way you're going to do that  
8 is with nuclear power, not with a bunch of solar  
9 cells or wind generators.

10 Are there any questions?

11 CHAIRPERSON DESMOND: The question I  
12 would ask, and first let me thank you for taking  
13 the time to communicate your views on this issue,  
14 the Commission did have workshops this year taking  
15 up the subject of nuclear power.

16 Once again, it's been a long time. I  
17 just didn't know if you had an opportunity to  
18 review that report.

19 MR. BULF: No, Mr. Chairman, I was not  
20 informed. And I wish the people in the state were  
21 better educated on nuclear power.

22 CHAIRPERSON DESMOND: Okay. Well, I'd  
23 just ask staff to see that he has either a link or  
24 a printout or information on the work product  
25 there. It's a fairly comprehensive report, and

1       it's part of our Integrated Energy Policy Report.  
2       So I wanted to make sure you had that, and  
3       certainly appreciate your thoughts on that.

4               MR. BULF: Well, thank you, because I  
5       think we're moving into, you know, dangerous  
6       times. I know some people have talked about the  
7       natural gas deposits off the coast, but that's  
8       under 3000 feet of water. I mean it's going to  
9       take a lot of energy to get down there and extract  
10      that gas.

11             I see what the Norwegians are doing  
12      under the North Sea in extracting their natural  
13      gas. I mean they've got divers down and remote-  
14      control equipment, mining, you know, setting up  
15      all the apparatus to go down 800 meters. I mean  
16      that's not cheap. Somebody's going to pay for  
17      that.

18             And if we put these natural gas ports in  
19      the United States here, that's going to cost about  
20      a billion dollars apiece with all the logistics  
21      involved in that. And, of course, it's very  
22      dangerous and a very tempting terrorist target,  
23      too.

24             CHAIRPERSON DESMOND: Okay, as I said --

25             MR. BULF: I thank you for your time.



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 17th day of November, 2005.

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345