

BUSINESS MEETING
BEFORE THE
CALIFORNIA ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

In the Matter of:)
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Business Meeting)
)
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CALIF ENERGY COMMISSION
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CALIFORNIA ENERGY COMMISSION
HEARING ROOM A
1516 NINTH STREET
SACRAMENTO, CALIFORNIA

WEDNESDAY, MAY 21, 2008

10:07 A.M.

ORIGINAL

Reported by:
Peter Petty
Contract Number: 150-07-001

COMMISSIONERS PRESENT

Jackalyne Pfannenstiel, Chairperson

James D. Boyd, Vice Chairperson

Arthur H. Rosenfeld

STAFF and CONTRACTORS PRESENT

Melissa Jones, Executive Director

William Chamberlain, Chief Counsel

Harriet Kallemeyn, Secretariat

Chris Davis

Karen Perrin

Libbie Bessman

Malachi Weng-Gutierrez

Peter Strait

Jamie Patterson

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P R O C E E D I N G S

10:07 a.m.

CHAIRPERSON PFANNENSTIEL: Good morning.
This is the Energy Commission business meeting of
May 21st. Please join me in the Pledge of
Allegiance.

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

CHAIRPERSON PFANNENSTIEL: No changes to
the published agenda this morning.

Consent calendar. Do we have a motion?

COMMISSIONER ROSENFELD: I move the
consent calendar.

COMMISSIONER BOYD: Second.

CHAIRPERSON PFANNENSTIEL: All in favor?

(Ayes.)

CHAIRPERSON PFANNENSTIEL: Item number
2, possible approval of an amendment petition to
upgrade emissions controls on the project's four -
- the project, the Kern River Cogeneration Company
-- four combustion turbines. Good morning.

MR. DAVIS: Good morning. My name is
Chris Davis and I'm the Compliance Project
Manager for the Kern River Cogeneration Company
Power Plant project.

1 Kern River was approved in 1983, August
2 of '83. It began operation in August of 1985.
3 Kern River is a 300 megawatt cogen facility with
4 four turbines that produce 75 megawatts each.

5 The project, in addition to providing
6 power to the grid, provides steam to the oilfields
7 of Kern County near Oildale, just north of
8 Bakersfield.

9 Heat recovery steam generator provide
10 steam use for thermal enhanced oil recovery.
11 Because there's a lot less of that going on now
12 than there was back in the '80s, Kern River can
13 also operate up to two turbines in simple cycle
14 mode.

15 This amendment petition before you today
16 was filed September 10, 2007. It would allow the
17 installation of enhanced dry loNOx combustors that
18 will reduce the oxides of nitrogen, or NOx
19 emissions, from Kern River quite a bit. From 16.4
20 parts per million to 3 parts per million. And it
21 would also allow Kern River to comply with the San
22 Joaquin Valley Air Pollution Control District
23 retrofit rule 4703.

24 This petition meets all the filing
25 criteria of section 1769(a) of the siting

1 regulations that concern post-certification
2 project modifications.

3 We received absolutely no comments at
4 all. And this is a huge improvement to the air
5 quality requirements in the Kern River final
6 decision.

7 Staff has analyzed the petition and
8 recommends its approval, with the modification of
9 one condition of certification, that is AQ-18,
10 which will reflect the much lower NOx emissions.

11 CHAIRPERSON PFANNENSTIEL: Thank you,
12 Chris. Why wasn't this done originally?

13 MR. DAVIS: Back in the '80s? The --

14 CHAIRPERSON PFANNENSTIEL: Just a new
15 technology?

16 COMMISSIONER BOYD: Technology.

17 MR. DAVIS: Yes, the control technology
18 wasn't available at that time. Several years ago
19 the Air Pollution Control District passed this
20 retrofit rule and gave Kern River and Sycamore,
21 the next item to come, the option of either
22 reducing to 5 parts per million at that time with
23 selective catalytic reduction, or to wait till
24 their next major overhaul and then have to get
25 down to 3 parts per million. They chose that

1 latter option.

2 CHAIRPERSON PFANNENSTIEL: I see. Thank
3 you. Other questions?

4 COMMISSIONER BOYD: I'm delighted to
5 move approval.

6 COMMISSIONER ROSENFELD: Second.

7 CHAIRPERSON PFANNENSTIEL: In favor?

8 (Ayes.)

9 CHAIRPERSON PFANNENSTIEL: Thank you.
10 And then you'll do the next one, too, item 3?

11 MR. DAVIS: Yes.

12 CHAIRPERSON PFANNENSTIEL: Sycamore
13 Cogeneration Company, Sycamore Cogeneration Power
14 project. Possible approval of an amendment
15 petition to upgrade emission controls on the
16 project's four combustion turbines.

17 MR. DAVIS: Sycamore was approved
18 December 10th of '86 and began operation in 1988.
19 It's a virtual twin of Kern River that was born
20 two years later.

21 Again, 300 megawatts; four turbines
22 producing 75 megawatts; and the heat recovery
23 steam generators to produce steam for the Kern
24 County oilfields.

25 This amendment, again filed September

1 10, 2007, allowing installation of enhanced dry
2 loNOx combustors for Sycamore to reduce Sycamore's
3 NOx emissions from 16.4 to 3 parts per million.
4 And also allow Sycamore to comply with that
5 retrofit rule 4703.

6 This petition meets all the filing
7 criteria of section 1769(a) of the siting
8 regulations that concerns post-certification
9 modifications. Again, we received no comments.
10 And, again, this is a very big improvement to the
11 air quality requirements in the original plant
12 certification.

13 Staff analyzed this petition and again
14 recommends its approval. The one difference being
15 that condition of certification AQ-19 would be
16 changed to reflect the lower limits, rather than
17 18.

18 CHAIRPERSON PFANNENSTIEL: Thank you.
19 Questions?

20 COMMISSIONER BOYD: No. I'd again be
21 delighted to move approval. I remember both these
22 plants when I was wearing a different hat, the air
23 quality hat. So this is good to see.

24 COMMISSIONER ROSENFELD: This is indeed
25 good news and I second it.

1 CHAIRPERSON PFANNENSTIEL: All in favor?

2 (Ayes.)

3 CHAIRPERSON PFANNENSTIEL: Thank you.

4 Item 4, possible approval of \$425,867
5 loan augmentation to the City of Chula Vista's
6 existing \$607,446 loan awarded on February 27,
7 2008. Good morning.

8 MS. PERRIN: Good morning. My name is
9 Karen Perrin and I'm with the public programs
10 office.

11 This is a request for a loan
12 augmentation to the City of Chula Vista's existing
13 \$607,446 loan that was already awarded at the
14 February 28th business meeting.

15 The original loan was approved to
16 upgrade the mechanical and lighting systems at six
17 of the city facilities.

18 The additional funding will help the
19 city meet its goal of improving the energy
20 efficiency of its recreational pool. This loan
21 augmentation will fund the installation of two,
22 new, high-efficiency boilers. The boilers are
23 old, inefficient and one has recently ceased to
24 function.

25 The loan will also fund the replacement

1 of solar hot water heating panels which were
2 broken and not being used. This will also fund
3 the replacement of the swimming pool cover, as
4 well as additional project costs associated with
5 the original loan.

6 The combined project costs will be
7 \$1,033,313, and are estimated to save the city
8 about \$214,654 annually with a simple payback of
9 4.8 years.

10 These projects will also meet the state
11 energy efficiency goals and reduce greenhouse gas
12 emissions by 848 tons per year. The city is
13 estimated to save 1.4 million kilowatt hours and
14 49,600 therms annually.

15 The loan is consistent with the CEC's
16 2007 Integrated Energy Policy Report to reduce
17 energy and greenhouse gas by implementing cost
18 effective efficiency projects.

19 This item has been previously approved
20 by the Efficiency Committee and staff is seeking
21 your approval on this item.

22 CHAIRPERSON PFANNENSTIEL: Thank you.
23 And I know from the information that staff
24 provided me that with this approval we'll have
25 approximately \$5 million left in the load fund?

1 MS. PERRIN: Just under that, yes.

2 CHAIRPERSON PFANNENSTIEL: Yes. Okay.

3 Are there other questions?

4 COMMISSIONER BOYD: I have a question.

5 I'm just curious. I think this is a great thing
6 to do and it just makes me wonder, did the city
7 kind of come upon these efficiencies on their own?
8 Did they respond -- or did they respond to some
9 form of education they might have received from
10 this agency?

11 I'm asking the questions only because I
12 can only imagine that there's a lot of city pools
13 that are getting old in this state, and might be
14 candidates for this very same thing. Seems like a
15 very good thing to do, as --

16 COMMISSIONER ROSENFELD: Probably have -
17 - good swimming pool covers.

18 COMMISSIONER BOYD: Indeed. So I'm just
19 wondering, do we have a mechanism to market this
20 kind of an idea to cities as we market efficiency
21 in all forms?

22 MS. PERRIN: Well, this one sort of fell
23 into our lap because through an outreach program
24 they came to us for the original loan. And right
25 after that loan was approved, their boiler broke

1 down. And so they came to us for the additional
2 funding.

3 So we didn't actually market towards
4 their swimming pool specifically, but it just
5 happened that they needed the additional funding.

6 CHAIRPERSON PFANNENSTIEL: But I do
7 think that's a interesting prospect, Commissioner
8 Boyd. We are always looking for ways to make sure
9 that all of the bond funding that we have
10 available for loans is used appropriately. And
11 this might be a real useful way to get this out
12 there.

13 COMMISSIONER BOYD: Yeah, I don't know
14 if the local government commission and/or the
15 League of Cities is in a position to help us
16 advertise this. But, in any event --

17 CHAIRPERSON PFANNENSTIEL: They're
18 always looking for money for energy efficiency.

19 COMMISSIONER BOYD: Right. Anyway, I
20 would move approval.

21 COMMISSIONER ROSENFELD: Second.

22 CHAIRPERSON PFANNENSTIEL: In favor?

23 (Ayes.)

24 CHAIRPERSON PFANNENSTIEL: Thank you.

25 MS. PERRIN: Thank you.

1 CHAIRPERSON PFANNENSTIEL: Item 5,
2 possible approval of contract 600-07-004 for
3 \$600,000 with ABT SRBI, to survey California
4 households and commercial fleets that purchase and
5 operate light-duty vehicles up to 10,000 pounds
6 gross vehicle weight. Good morning.

7 MS. BESSMAN: Good morning. Thank you,
8 Commissioners, thank you, Chairman. My name is
9 Libbie Bessman. I am with the fossil fuels
10 office.

11 Staff will use this survey to update the
12 coefficients used in the CALCARS model which
13 forecasts onroad, light-duty vehicle fuel demand.
14 CALCARS is one of the models used to complete
15 analysis for the 2009 IEPR.

16 Previous contracts to perform this
17 survey were conducted in 2000 and again in 2006.
18 This contract includes tasks to perform a focus
19 group, a recruitment survey and the stated
20 preference survey.

21 Additionally, the contractor will design
22 a website for the survey-takers, and update the
23 coefficients for the CALCARS model.

24 In preparation for the 2009 IEPR the
25 contract will begin June 2008, and be completed in

1 February 2009 to allow sufficient time to update
2 the CALCARS model.

3 Are there any questions I can answer?

4 CHAIRPERSON PFANNENSTIEL: Was this
5 contract competitively bid?

6 MS. BESSMAN: Yes.

7 EXECUTIVE DIRECTOR JONES: And I would
8 just add that there is an error in your backup
9 package; stated that the purpose of the contract
10 was to select a contractor to do the survey. The
11 purpose of the contract is to do the survey.

12 CHAIRPERSON PFANNENSTIEL: Thank you,
13 Melissa. Other questions?

14 COMMISSIONER BOYD: Well, this was
15 reviewed and approved by the Transportation
16 Committee. So I'll move approval of the item.

17 COMMISSIONER ROSENFELD: I'll second.

18 CHAIRPERSON PFANNENSTIEL: All in favor?

19 (Ayes.)

20 CHAIRPERSON PFANNENSTIEL: Thank you.

21 MS. BESSMAN: Thank you.

22 CHAIRPERSON PFANNENSTIEL: Item 6,
23 possible approval of contract CEC3360-56 for
24 \$1,459,584 with Stanfield Systems, Inc., to
25 design, develop and test DynaSim, a new

1 transportation energy demand forecasting tool.

2 Good morning.

3 MR. WENG-GUTIERREZ: Good morning,
4 Commissioners. My name is Malachi Weng-Gutierrez.
5 I work in the fuels and transportation division.

6 The contract before you today deals
7 specifically with the software development portion
8 of this project. It is the lion's share of the
9 contract work, and it is primarily dealing with,
10 again, software development, the actual coding of
11 the solution.

12 In addition to the actual software
13 development, they will be helping assisting us
14 with the design work, the development and the
15 testing of the product.

16 With Stanfield Systems, Incorporated,
17 they also have a subcontractor, Christiensen
18 Associates. Christiensen Associates will be
19 primarily dealing with looking at the existing
20 fourtran code in our existing models and
21 integrating that with the new system, the new
22 tool.

23 The new tool will both integrate and
24 expand our existing transportation energy models,
25 and will include primarily the four models that we

1 use in our division to forecast demand. Those
2 being CALCARS, the aviation model, freight model
3 and a transit model. Those will be the primary
4 models or modules in the new tool.

5 In addition, the work will include a
6 creation of a integrated data repository. It's a
7 centralized data repository we hope that will
8 allow for the consistency of analyses across all
9 transportation sector, as well as streamline the
10 process for updating data for any analysis that we
11 do in the future.

12 The work is anticipated to last
13 approximately 18 months from the beginning of the
14 contract, so we hope that it will be completed
15 around the end of 2009, beginning of 2010.

16 This does include a six-month period for
17 testing, which we are referring to as the pilot
18 phase. During that pilot phase the system will be
19 up and running here at the Energy Commission and
20 they will be -- Stanfield Systems will be on call
21 to support any problems that we have and to make
22 any adjustments to the system during that period.

23 Another feature of the final product
24 will be feedback loops which, in the current
25 modeling that we do in the fuels and

1 transportation division, have only been dealt with
2 in a cursory fashion. We anticipate that the new
3 system will better reflect the interactions
4 between the sectors and give us a better estimate
5 of overall demand for California.

6 We expect the model will be expanded in
7 the future to include other areas of interest.
8 And we are excited to begin work on this project.
9 At this time I would be happy to answer any
10 questions you have about this contract.

11 CHAIRPERSON PFANNENSTIEL: Thank you.
12 As I understand the timing, though, this work will
13 not be completed in time to be useful to the 2009
14 IEPR, is that correct?

15 MR. WENG-GUTIERREZ: That's correct.

16 CHAIRPERSON PFANNENSTIEL: But there
17 will be a pilot going on during the early part of
18 2009, so there might be some of that that would be
19 sufficiently developed to use in the IEPR, do you
20 think?

21 MR. WENG-GUTIERREZ: It may. I mean we
22 certainly could take a look at what some of the
23 early results are and compare them to our analysis
24 for the 2009 IEPR. But I think we would have to
25 probably decide, you know, which to use.

1 I think we're spending our time for the
2 2009 IEPR updating the existing models so that we
3 can have those ready for the 2009 IEPR. We don't
4 know, there may be issues at the beginning of the
5 testing period would prevent us from using those
6 results at that time.

7 Stanfield will be delivering products to
8 us throughout the development period. What they
9 suggested is, you know, providing us the modules
10 separately throughout the process. That won't
11 allow us to really analyze the feedback between
12 the sectors, so I'm not sure how we would -- you
13 know, we couldn't necessarily just use something
14 for the transit without taking into consideration
15 how that might affect light-duty vehicle demand.

16 So, we may be able to do comparisons for
17 the 2009 IEPR, but I would suggest using the
18 current models for the 2009 IEPR.

19 CHAIRPERSON PFANNENSTIEL: Okay. Was
20 this contract competitively bid?

21 MR. WENG-GUTIERREZ: Yes, it was.

22 CHAIRPERSON PFANNENSTIEL: Other
23 questions?

24 COMMISSIONER BOYD: This contract was
25 reviewed by the Transportation Committee so I'll

1 move approval. But I would add that, Chairman,
2 you and I are very familiar with the interest in
3 this subject, and the fact that somebody brought
4 us a proprietary model years ago. But, welcome to
5 government.

6 Malachi and staff have done a marvelous
7 job of inventing and creating a California Energy
8 Commission wheel since --

9 CHAIRPERSON PFANNENSTIEL: Right.

10 COMMISSIONER BOYD: -- since we couldn't
11 buy the wheel that was already out there. Welcome
12 to government. Thank you, Oracle.

13 In any event, this has been moving along
14 and we see light at the end of the tunnel.
15 Unfortunately not in time, again, for the 2009
16 IEPR, but hopefully IEPRs after that. I'm hoping
17 on what's left of my tour of duty here to see this
18 thing functioning some day.

19 Anyway, long motion to approve.

20 COMMISSIONER ROSENFELD: Second.

21 CHAIRPERSON PFANNENSTIEL: All in favor?

22 (Ayes.)

23 CHAIRPERSON PFANNENSTIEL: Thank you,

24 Malachi.

25 MR. WENG-GUTIERREZ: Thank you.

1 CHAIRPERSON PFANNENSTIEL: Item 7,
2 possible approval of California multiple award
3 schedule purchase order 07 409.00 025 for \$110,000
4 with Enterprise Networking Solutions, Inc., to
5 design and implement an automated webpage that
6 will allow public to search and retrieve
7 information directly from the appliance database
8 maintained by the Energy Commission's appliance
9 energy efficiency program. Good morning.

10 MR. STRAIT: Good morning. Our business
11 meeting item is a California multiple award
12 schedule contract with Enterprise Networking
13 Solutions, Inc. for the development of an online
14 searchable interface with the appliance efficiency
15 database that can be accessed and used by the
16 general public.

17 This follows the findings and
18 recommendations of the Third Wave technical
19 project assessment and offers numerous benefits to
20 both the Energy Commission and the public.

21 Specifically the Third Wave report
22 recommended greater automation, greater
23 internalization of appliance program tasks. This
24 project will automate the current process of
25 generating and uploading database export files

1 saving an estimated \$56,000 in program costs per
2 year, or 0.4 PY roughly.

3 Staff would also expect to field fewer
4 questions or requests really to the contents of
5 the database, particularly those related to the
6 existing time lag between certifying appliance and
7 uploading that listing to the Excel files we make
8 available online.

9 The goal of internalizing process would
10 also be served by this project, as the contract
11 includes fully documented source code, such that
12 the interface, once designed, would be fully owned
13 and maintained internally by Energy Commission
14 Staff.

15 In addition to the recommendations, the
16 Third Wave report contained a survey of current
17 users of the appliance efficiency database. The
18 overwhelming request mentioned by nearly every
19 respondent was to have direct online access to the
20 database through a webpage. This echoes requests
21 received regularly by staff for enhanced or
22 customized access to the appliance efficiency
23 data.

24 For example, by regulated manufacturers
25 that wish to see their listing in real time;

1 consumers looking for simpler and less confusing
2 listings of appliance efficiency data; and even by
3 other states that see our database as a powerful
4 resource for adopting energy efficiency
5 regulations that would parallel our own.

6 The interface developed by this project
7 would meet all these needs by allowing customized
8 searches to be run on the data in real time,
9 letting users easily see the data most relevant to
10 their needs.

11 As noted on the agenda, this is a CMAS
12 purchase order through the Energy Commission's
13 information technology services branch. Appliance
14 program staff have been working closely with ITSB,
15 as well as with Bob Aldrich, and the web
16 publishing team -- I'm a little nervous, can you
17 tell?

18 (Laughter.)

19 MR. STRAIT: -- in designing this
20 project. Further, the project has the support of
21 the Executive Office and has been approved by the
22 Efficiency Committee.

23 Overall offering an immediately
24 accessible and easy-to-use interface will do a
25 great deal to promote energy efficiency by

1 promoting the use of the appliance program data.

2 The public is coming to expect online
3 access to public data and information, and this is
4 an opportunity to meet and exceed these
5 expectations and demands.

6 Staff would appreciate your approval of
7 this purchase order, and I'm happy to answer your
8 questions.

9 CHAIRPERSON PFANNENSTIEL: Thank you
10 very much. Are there questions?

11 COMMISSIONER ROSENFELD: Yeah. I'm just
12 a little puzzled. I thought there was a pretty
13 heavily used online access already.

14 MR. STRAIT: The current way that we
15 make the data available to the public is through
16 exported Excel files. We don't have a direct
17 interface that they can use.

18 COMMISSIONER ROSENFELD: Okay.

19 CHAIRPERSON PFANNENSTIEL: So they can
20 get access to it, but it's not in the form that is
21 most readily usable?

22 MR. STRAIT: That's correct.

23 COMMISSIONER ROSENFELD: Okay, I move
24 the item.

25 COMMISSIONER BOYD: Second.

1 CHAIRPERSON PFANNENSTIEL: In favor?

2 (Ayes.)

3 CHAIRPERSON PFANNENSTIEL: Thank you.

4 MR. STRAIT: Thank you.

5 CHAIRPERSON PFANNENSTIEL: Good job.

6 Item 8, possible approval of contract 500-07-037
7 for \$5,850,866 with the Regents of the University
8 of California, Office of the President, California
9 Institute for Energy and Environment to 13
10 research projects to improve the transmission of
11 renewable energy. Good morning.

12 MR. PATTERSON: Good morning. I am
13 Jamie Patterson; I am with the Commission's
14 research and development division.

15 The agreement we have today will be for
16 13 projects, as you just mentioned. The research
17 will be done by the California Institute for
18 Energy and Environment. They are an office under
19 the Regents of the University of California's
20 Office of the President. They will be the prime
21 researchers.

22 These 13 projects were selected by those
23 researchers, packaged together within a proposal
24 and given to the Commission. We evaluated the
25 particular proposal with these 13 projects, using

1 criteria that was developed by the transmission
2 research program policy advisory committee. The
3 committee is made up of stakeholders of
4 transmission systems throughout California,
5 primarily the three main utilities, Pacific Gas
6 and Electric Company, San Diego Gas and Electric
7 and Southern California Edison, along with the
8 California Independent System Operator, Bonneville
9 Power Authority, and the Department of Energy.

10 Using that criteria that they have
11 established for the needs of California's
12 transmission system, we found that these 13
13 projects are a good fit and we recommend approval
14 of this contract.

15 CHAIRPERSON PFANNENSTIEL: Let me just
16 make sure I understand. The 13 projects were
17 initially identified by UC, and then sent to this
18 transmission research group?

19 MR. PATTERSON: Yes. That is usually
20 how we do our contracts within the program that I
21 manage. Generally speaking, we ask for proposals.
22 Sometimes we'll say in certain topic areas. But
23 we do not actually go out and find projects for
24 researchers to do, per se.

25 CHAIRPERSON PFANNENSTIEL: But do we

1 have a certain amount of money available so that
2 if, for example, they submitted 30 projects, do we
3 have a certain amount of money available and all
4 30 -- a certain screen that we put them through?
5 How is that --

6 MR. PATTERSON: We only have a
7 limited --

8 CHAIRPERSON PFANNENSTIEL: How is it
9 narrowed down to these 13?

10 MR. PATTERSON: Okay, we only have a
11 limited amount of money. They initially
12 approached us in what they had been operating our
13 program for us as administrators prior to --

14 CHAIRPERSON PFANNENSTIEL: And they is
15 UC?

16 MR. PATTERSON: Oh, the California
17 Institute for Energy and Environment at UC. And
18 as such, they were aware of our budgeting
19 requirements, and our budget for coming years. We
20 make that public through the public forums of the
21 policy advisory committee meeting. They meet
22 three times a year.

23 And so they developed a package that
24 would fit within our budget. Apparently. We
25 actually had a little bit -- we have other money;

1 we did not award them the entire budget for the
2 transmission research program by any means. This
3 was just how these projects added up.

4 CHAIRPERSON PFANNENSTIEL: But we do
5 include in this recommendation all 13 that they
6 submitted to us?

7 MR. PATTERSON: Yes.

8 CHAIRPERSON PFANNENSTIEL: And all 13
9 have been reviewed by the committee that you
10 described?

11 MR. PATTERSON: They have --

12 CHAIRPERSON PFANNENSTIEL: And found
13 valuable to us?

14 MR. PATTERSON: They --

15 CHAIRPERSON PFANNENSTIEL: I'm just
16 looking for the process.

17 MR. PATTERSON: Oh, okay, the process
18 is --

19 CHAIRPERSON PFANNENSTIEL: That ends up
20 with 13 projects for, you know, \$5 million, 5.8 --

21 COMMISSIONER ROSENFELD: Close to 6.

22 MR. PATTERSON: Okay. The policy
23 advisory committee that oversees the work under
24 the transmission research program doesn't actually
25 review at the project level. And that is because

1 frankly, it starts to look a little bit like there
2 could be possibility for conflict of interest at
3 some point if we were to go down that road.

4 So what they do is they supply the
5 issues, and they outline the issues, such as we
6 need to have better operational tools so we can
7 see how the grid is actually operating in real
8 time. And then we develop specific projects to
9 address those issues. Or we look for projects
10 that actually address those issues.

11 But, they actual -- we don't actually
12 use them to review and approve an individual
13 project, per se.

14 EXECUTIVE DIRECTOR JONES: So, let me
15 just add, to clarify, that we use the transmission
16 policy advisory committee to help us identify the
17 areas in transmission where research is needed.
18 And then we work through CIEE and our other
19 available --

20 CHAIRPERSON PFANNENSTIEL: So we send
21 that information and the dollar amount available
22 to CIEE and they find us, and then propose to us,
23 a package --

24 MR. PATTERSON: Yes.

25 CHAIRPERSON PFANNENSTIEL: -- of

1 projects to do that?

2 EXECUTIVE DIRECTOR JONES: That's
3 correct.

4 CHAIRPERSON PFANNENSTIEL: Thank you. I
5 understand now. Other questions?

6 COMMISSIONER ROSENFELD: I move the
7 item.

8 COMMISSIONER BOYD: I'm going to second
9 the item with a comment that this item was all
10 packaged and processed by the Research Committee
11 before I was a member of the Research Committee.
12 So, I've been particularly interested because of
13 the amount of money. But frankly I've relied very
14 heavily not only on the research process, but on
15 Commissioner Byron who has become our transmission
16 person. And he and I talked about this, as well.
17 He sent us all an email indicating his support for
18 this item. So on his behalf, I'll second the
19 item.

20 CHAIRPERSON PFANNENSTIEL: All in favor?
21 (Ayes.)

22 CHAIRPERSON PFANNENSTIEL: Thank you.

23 Item 9, possible approval of seven
24 funding awards totaling \$5,726,047 under the
25 geothermal resources development account grant

1 solicitations. Good morning.

2 MR. HINGTEN: Good morning. I'm John
3 Hingten from the energy generation research
4 office. We're seeking your approval to award
5 seven grants resulting from the 2007 solicitation
6 for the geothermal resources development account,
7 which we refer to as the GRDA.

8 GRDA grant and loan funding is made
9 available by the Energy Commission every one to
10 two years, to private entities and local
11 jurisdictions. This funding promotes the
12 development of geothermal resources and
13 technologies.

14 Awards may be made in one of three
15 categories, resource development, planning and
16 mitigation.

17 As a result of this funding solicitation
18 we are recommending the award of seven grants
19 totaling \$5,726,047. This competitive
20 solicitation began with the posting of a program
21 opportunity notice in September 2007. The
22 application for the GRDA process was -- the
23 process was in two phases, preapplication phase
24 followed by feedback to applicants. And then
25 submission of final applications.

1 Seventeen final applications were
2 received by February of 2008. Final applications
3 were scored and ranked by a technical advisory
4 committee which then recommended seven projects to
5 the Research, Development and Demonstration
6 Committee.

7 The RD&D Committee approved the projects
8 on April 30th. And a notice of proposed awards
9 was posted on May 1st.

10 This year seven awards are recommended.
11 Six in the resource development category and one
12 in the planning category. The recipients of these
13 grants would provide \$7,448,837 in matching
14 contributions.

15 The awards this year include three
16 projects in well-drilling and testing; two in the
17 advancement of technology; one resource
18 investigation; and one to perform market research.

19 We request your approval for these seven
20 grants. And with that I'll be happy to answer
21 questions.

22 CHAIRPERSON PFANNENSTIEL: Thank you.
23 Are there questions? I have none.

24 COMMISSIONER ROSENFELD: Just a small
25 one. There's nearly \$6 million of our money, or

1 GRDA money, and then you said \$7 million of shared
2 money? What sort of -- who puts up the shared
3 money?

4 MR. HINGTEN: This is money put up by
5 the applicants as their matched contribution. And
6 it could include professional work, labor,
7 materials, contributions of various kind, such --

8 COMMISSIONER ROSENFELD: But it's mainly
9 in-kind?

10 MR. HINGTEN: It's in-kind, yes. Yes.

11 COMMISSIONER ROSENFELD: I'm ready to
12 move the item.

13 COMMISSIONER BOYD: Second.

14 CHAIRPERSON PFANNENSTIEL: In favor?

15 (Ayes.)

16 CHAIRPERSON PFANNENSTIEL: Thank you.

17 MR. HINGTEN: Thank you.

18 CHAIRPERSON PFANNENSTIEL: Minutes of
19 the May 7th business meeting. I understand we
20 were all present and so we can approve.

21 COMMISSIONER ROSENFELD: I move the
22 minutes.

23 COMMISSIONER BOYD: Second.

24 CHAIRPERSON PFANNENSTIEL: In favor?

25 (Ayes.)

1 CHAIRPERSON PFANNENSTIEL: The minutes
2 are approved.

3 Commission Committee discussion. Let me
4 just point out that part of the reason we're
5 shorthanded today is that Commissioner Douglas is
6 testifying before the Senate Energy Committee as
7 they're looking at AB-32 implementation.

8 Senator Kehoe specifically desired to
9 have an Energy Commissioner in attendance to help
10 the committee, her energy committee, understand
11 what the two Commissions are doing on the AB-32
12 implementation.

13 So since Commissioner Byron was already
14 engaged for this morning, Commissioner Douglas is
15 doing that this morning.

16 Other Commissioner reports or
17 discussion? None.

18 Chief Counsel report, Mr. Chamberlain.

19 MR. CHAMBERLAIN: Thank you, Madam
20 Chairman. I have two items. The first is last
21 week Kevin Bell of my office participated in a
22 procedural conference in Las Vegas related to the
23 Yucca Mountain project.

24 I think the Commission is aware that the
25 Department of Energy is anticipated to file an

1 application to construct and operate the Yucca
2 Mountain repository for spent fuel probably within
3 the next month. And the administrative proceeding
4 is anticipated to be underway sometime in the
5 fall.

6 As a consequence, I will be working with
7 you and the Executive Office to try and define the
8 options that are before the Commission and,
9 indeed, the State of California. We've been
10 talking to the Attorney General's Office. They
11 intend to represent the state with respect to
12 certain transportation issues. There are also
13 groundwater issues and potential wildlife issues.

14 But their decision needs to be made
15 reasonably quickly, so probably within the next
16 month to six weeks, as to the level of
17 participation that the state, through its various
18 agencies, will decide to proceed with.

19 And we need to figure out the budgeting
20 for that and the staffing. So I'll be back to you
21 on that.

22 CHAIRPERSON PFANNENSTIEL: Thanks, Bill.
23 Was there any -- do you now of what other agencies
24 besides the Energy Commission and the AG who might
25 be participating?

1 MR. CHAMBERLAIN: We're unaware of any
2 others. Inyo County --

3 CHAIRPERSON PFANNENSTIEL: And so --

4 MR. CHAMBERLAIN: -- may be
5 participating.

6 CHAIRPERSON PFANNENSTIEL: Okay.

7 MR. CHAMBERLAIN: Because they border --
8 the repository is only a few miles away from their
9 border.

10 CHAIRPERSON PFANNENSTIEL: Thank you.

11 COMMISSIONER BOYD: I would just add
12 that among the other duties, as required, I got
13 handed, when I arrived here many years ago, was
14 the liaison with the Nuclear Regulatory Commission
15 and our sole staff person, Barbara Byron, and I
16 have been discussing this eventuality for quite
17 some time. And Bill's, for obvious reasons, been
18 brought into the discussion.

19 This is going to weigh heavily on us
20 because the state has a long record of being
21 concerned about lots of issues associated with
22 this facility. Many long years of submission of
23 testimony, primarily on behalf of the Commission
24 by Barbara; sometimes, I, myself. Sometimes I'm
25 sure in the distant past by Mr. Chamberlain.

1 But as it comes closer to the actual
2 permitting for this facility in Nevada that is so
3 contentious, the potential workload drain is very
4 substantial. And also the policy level aspects of
5 whether the Governor personally calls for this or
6 whether we move on our own.

7 The Attorney General has indicated his
8 intention to move forward on the transportation
9 component which means it's at his expense, but not
10 the permit, itself. And if we were to ask them to
11 proceed we have to pay the bill.

12 CHAIRPERSON PFANNENSTIEL: Right, got
13 it.

14 COMMISSIONER BOYD: It'll be
15 substantial.

16 MR. CHAMBERLAIN: And, of course, this
17 does relate to the Commission's responsibilities
18 under section 25524.2 because at some point the
19 Commission might be asked, is there, in fact, a
20 technology for the disposal of nuclear waste, and
21 can we proceed with a nuclear power plant in this
22 state.

23 CHAIRPERSON PFANNENSTIEL: Right.

24 COMMISSIONER BOYD: It's going to be
25 hard for us not to be involved somehow or another

1 since we -- the shield law, as I call it, which
2 has been continually finding that the waste
3 problem is not solved, is why we've written
4 extensive reports in the last few years, and
5 continue to recommend that there's no solution to
6 this problem.

7 But a lot of people think there is a
8 solution to the problem by the mere fact that DOE
9 is proceeding and/or this permitting process is
10 going to begin.

11 So, it will prove to be very interesting
12 to say the least.

13 MR. CHAMBERLAIN: The second item --

14 COMMISSIONER ROSENFELD: Bill, can you
15 speak a little louder into the mike?

16 MR. CHAMBERLAIN: Certainly. Get a
17 little closer here. The second item is that
18 Michael Doughton of my office accompanied a number
19 of staff people to a conference that DOE put on in
20 Pittsburgh related to carbon capture and
21 sequestration.

22 And at that conference I think you're
23 aware that the Commission was awarded \$65 million
24 to do the WESTCARB phase III project. I asked
25 Michael to put together a few slides to give you a

1 sense of what happened at that conference, for
2 your information.

3 CHAIRPERSON PFANNENSTIEL: Fine, thank
4 you.

5 MR. DOUGHTON: Good morning,
6 Commissioners. First I want to thank our Chief
7 Counsel, Bill Chamberlain, for putting this trip
8 together and getting the necessary approvals very
9 quickly.

10 I think it's tremendously valuable,
11 given the award that was announced at the
12 conference, which I was lucky enough to be there
13 to hear personally.

14 I guess the first thing I would
15 emphasize is this little subcaption, short
16 timeframe for action. There's controversy as to
17 how much time there is to address the global
18 warming and greenhouse gas issues that we face.
19 Some parties at this conference would argue that
20 it's too late, and I'm not one of those. From
21 what I heard, I'm not an expert, certainly not a
22 scientific background, but I've been trying to
23 read as much as I can, both in the technical and
24 legal fields, over the last year to get up to
25 speed, knowing that this award might happen at any

1 time.

2 So I guess, taking my comments with a
3 grain of salt, these are going to be my comments
4 as to how I perceived it and what I heard the 700
5 experts in that room talking about.

6 It was quite impressive, certainly one
7 of the most impressive conferences I've ever been
8 to in my career. Seven hundred of the world's top
9 people in this area, this highly technical area.
10 And it wasn't just academicians and scientists and
11 the technical folks, this conference included
12 quite a few top CEOs from oil and gas companies
13 and coal, lawyers, regulators, high government
14 officials, and a substantial international
15 presence, which drove home to me that this is a
16 global issue, certainly not just local, not even
17 national. But everybody's looking at this right
18 now. Certainly the developed countries and
19 increasingly the lesser developed countries.

20 I would start with these six points
21 here. Carbon sequestration is going on now.
22 There's a number of projects actually happening on
23 a very large scale around the world. I'll talk
24 about those in a minute.

25 And the driving thing here is that time

1 is short. There's a great need for demonstration
2 projects so that this technology is as good as it
3 sounds. And there seemed to be some very good
4 encouraging news in the technical realm.

5 The laws, the regulations have to catch
6 up very quickly to that. And it's very daunting.
7 So the dual themes I got from this was not only
8 the daunting nature of the task, but the very
9 encouraging amount of talent that there is in the
10 world scientifically and political will and some
11 significant consensus on both sides of the
12 political spectrum that this needs to be done, and
13 it is going to happen.

14 It's not without controversy. There
15 were some groups there that protested, and I'll
16 talk about that. But the moment seems to be, to
17 me, inevitable that this is what we're going to be
18 doing as a species, as one of the wedges to attack
19 the problem.

20 I guess this last point about the USEPA
21 issuing regulations on underground injection
22 control is very significant from a legal
23 standpoint, because that's going to start to fill
24 in the great gaps we have in the regulatory realm.

25 And the states and the other countries

1 will be looking to that very closely to see how to
2 proceed, and whether there's a preemption or
3 whether we need to look at this through individual
4 states.

5 These were some of the sponsors.
6 Actually I think these are the sponsors. Quite a
7 significant corporate presence, quite a
8 significant attention from the industry. Coal in
9 Pittsburgh is the energy source. And I'd never
10 been in a coal town before.

11 So, I have some sobering news to report
12 to the Commission on the coal front. My eyes were
13 opened because there were these barges and trains
14 going by constantly in front of the hotel with
15 just tons of coal. It was quite obvious that is
16 the power source. And I'll talk to you about
17 Peabody's presentation, which was one of the most
18 compelling and polemic presentations. And I'll
19 tell you about Greenpeace's counter presentation.

20 COMMISSIONER ROSENFELD: Why not tell us
21 about it?

22 MR. DOUGHTON: Well, those were the two
23 high points of the conference from a dramatic
24 standpoint. Most of the attendees were very
25 factual and presenting objective data, not

1 particularly argumentative, but, you know, from an
2 expertise standpoint.

3 Greenpeace staged a demonstration I
4 believe it was the second day in which quite a
5 large number of demonstrators entered the room and
6 disrupted the presentation, and released 1000
7 balloons or so into the very large conference room
8 with "coal is dirty" and similar messages, and
9 took over the podium and proceeded to lecture the
10 room on the evils of coal.

11 And in my opinion, not terribly
12 effective from my standpoint. My personal
13 sympathies are with environmental groups but they
14 were talking to a roomful of some of the top
15 experts, and lecturing without the benefit of a
16 lot of factual data, but a lot of argumentation,
17 which for the room I don't think was very
18 effective. Perhaps for a soundbite standpoint it
19 could have some public resonance.

20 So, that demonstration was ushered out
21 eventually. And after that, not sure if it was
22 the same day or the next day, the senior vice
23 president from Peabody Coal spoke to the room.
24 And as much as I would like to say it was not a
25 compelling demonstration or conversation, I cannot

1 report that. This person was armed with some very
2 potent facts about the primacy of coal as the
3 world's power source. And the fact that it's
4 here, it -- I have a slide on this. Maybe I can
5 fast-forward to that.

6 Basically the senior vice president of
7 Peabody made a very compelling case to my ears
8 anyway, that coal is here, it is the power source
9 that we have to deal with. And carbon capture and
10 sequestration is the answer that they are
11 proposing, among others.

12 And they talk about clean coal, they
13 talk about peak oil, they talk about the fact that
14 there's 250 billion tons of reserves here in this
15 country that is 27 percent of the world's coal.

16 This means that we don't have to import
17 our energy, we have it here. And that relates to
18 national security. Advocates substitute natural
19 gas, which is some sort of natural gas made from
20 coal. And that --

21 COMMISSIONER BOYD: SNG to most usually
22 means synthetic natural gas.

23 MR. DOUGHTON: I may have that -- I
24 believe that was --

25 COMMISSIONER BOYD: This is a new --

1 MR. DOUGHTON: -- the term that they
2 used.

3 COMMISSIONER ROSENFELD: Yeah, I don't
4 want to learn new acronyms, -- just say it was
5 synthetic.

6 MR. DOUGHTON: Okay. Synthetic natural
7 gas will be piped everywhere in this country,
8 including California. And this is where this
9 senior vice president got the room to laugh by
10 saying that in California we won't even know that
11 we're using it, because they're going to pipe it
12 over here.

13 COMMISSIONER BOYD: Oh, yes, we will.

14 MR. DOUGHTON: And that brought some
15 laughter. The other statement that this senior
16 vice president made was the last one up there that
17 was quite shocking to me, that everybody in the
18 world deserves to have the same lifestyle as the
19 people in that room. And I'll just -- maybe that
20 just speaks for itself, but if the people in that
21 room included the senior vice president, then I
22 can only imagine everybody having their own
23 personal Lear Jet, not adding to the solution.

24 Now, if I could flip back one --

25 COMMISSIONER BOYD: You don't happen to

1 know how far above sea level Pittsburgh is, do
2 you? No. Never mind.

3 CHAIRPERSON PFANNENSTIEL: It's on three
4 rivers.

5 MR. DOUGHTON: I do not. There are
6 three rivers there.

7 CHAIRPERSON PFANNENSTIEL: Exactly.

8 COMMISSIONER BOYD: Yeah, right. When
9 they're ankle deep in water some day maybe they'll
10 have a different view about the life style.

11 MR. DOUGHTON: I'd like to present to
12 you the other side that was presented. Again,
13 these are the two most polemic polarities that
14 there was some political turmoil around these two
15 sides. And the rest of it was fairly factual.

16 Greenpeace and the Rain Forest Action
17 Network presented a very strident position against
18 carbon capture and sequestration that I think the
19 Commission needs to be aware of. And they cited
20 some of these statistics: 30 percent
21 inefficiency; increased costs; leave it in the
22 ground; and it diverts potential research and
23 resources from other renewable research, et
24 cetera.

25 They do argue that it's, I believe if I

1 had it correctly, it's too late. The ten-year
2 demonstration project and then the timeframe for
3 commercial implementation just isn't going to
4 catch up. And they don't like the public taking
5 the risk should something go wrong.

6 Well, I personally am not a defeatist,
7 and I think that these points were not as
8 factually supported as the coal side of the
9 equation. They just didn't come armed with facts.
10 It was more emotional arguments. And some of them
11 were compelling emotional arguments, but
12 nevertheless, the factual data didn't seem to be -
13 - now, this is true, I think there's consensus on
14 the inefficiency and some of these points.

15 But, again, the fact is coal does
16 power -- they talked about China and India,
17 obviously. One thing that the developed societies
18 such as the United States and California, perhaps
19 can do for the world and for themselves is to
20 implement these large-volume sequestration
21 demonstration projects. And we now have the
22 opportunity to do that in California.

23 It's not without risks. And I guess I
24 will go to my slide on risks. Bear with me,
25 please.

1 MR. CHAMBERLAIN: I just taught Michael
2 how to use the PowerPoint in the last two days, so
3 he's doing pretty well.

4 MR. DOUGHTON: Thank you, again, Bill.
5 Well, let me just go through these impediments
6 here. There are some serious risks on the legal
7 side in terms of defining who owns this
8 underground space. We're going to have to work
9 that out in short order.

10 I'm an optimist, that's what the law
11 does. It'll be confusing for awhile. There'll be
12 some jurisdictional disputes. These plumes
13 underground can migrate and trespass. It can be
14 very complex legally if it trespasses into another
15 jurisdiction. These are the kind of things that
16 we're going to have to quickly come to terms
17 with. It's not easy, but it's something
18 that we can do, I believe.

19 Long-term financial liability. The
20 amount of time this carbon must stay sequestered
21 is a matter of debate. When I first brought my
22 fresh eyes to this, I was worried about thousands
23 of years and more. As I've learned more from
24 reading the technical articles, I've come to view
25 it more as perhaps a, I don't know, I'm just

1 guessing, 100- or 200-year type of bridging the
2 technologies before we can get off our addiction
3 to fossil fuels. And that once we -- this is just
4 an interim period that we need to bridge.

5 The issue of whether CO2 is a waste or a
6 commodity, it can be a pollutant, it can be
7 either, it can be sold, so it's both, really. And
8 it has a huge impact on the legalities depending
9 on how the authorities decide to classify it.

10 There's a cost here in terms of
11 capturing and storing it. Public confidence is a
12 big issue that we're going to have to grapple
13 with, I think. I just think the public is going
14 to get a very skewed view of this. And we need to
15 do whatever we can to get the real information out
16 there.

17 And, of course, at the bottom here I
18 have measuring, monitoring, verification is one of
19 the keys. That, along with site selection, is
20 going to be the key to a successful carbon
21 sequestration project, in my opinion.

22 First of all, they have some very
23 advanced site selection technologies now that
24 impressed me. Again, I'm not a scientist, but it
25 was quite impressive to me.

1 They know how to track seismic
2 underground issues and they know how to map them
3 and get data points and figure out where gases can
4 stay trapped. And so if a site is well selected
5 there's some very encouraging news on the
6 technological front that this stuff will stay
7 trapped.

8 There's chemical bonding; there's
9 capillary action that keeps this stuff trapped.
10 And it's heavier than -- there is buoyancy, but as
11 it goes down at that level, it becomes kind of
12 like a liquid and tends to stay trapped. I was
13 encouraged from that standpoint.

14 On positive developments, there's a lot
15 of experience already with enhanced oil recovery
16 and enhanced gas recovery where it's injected.
17 It's a smaller scale but they know a lot from that
18 experience that they can apply.

19 These three projects are currently
20 ongoing, large-scale injection of carbon, CO2. So
21 this stuff is happening now, and the law just has
22 to catch up.

23 Very few blowouts in the field. This is
24 the kind of thing that I worried about at first,
25 sort of a doomsday of high-pressure gas exploding

1 to the surface. Very rare apparently. And even
2 leakage can be very well tracked. Monitoring is
3 going to be key to give public confidence to the
4 general public as well as the regulators and
5 politicians who are going to have to decide
6 whether to take this risk.

7 The bottom figure is the
8 intergovernmental panel on climate change's
9 estimate of the chance of retaining this stuff
10 underground; 99 percent over 100 years is very
11 likely. And 99 percent over 1000 years likely.
12 And they define the terms likely and very likely
13 in a scientific way that I don't have in front of
14 me, but it's a high confidence factor.

15 I want to make one point about
16 Greenpeace. They do view carbon sequestration as
17 a tool for the coal industry to just continue
18 business as usual. And Peabody Coal did nothing
19 to dispel that. I think it is a tool for that.
20 But in my opinion it's also probably an essential
21 tool to bridge this gap that we have of 100 or 200
22 years.

23 The two kinds of risk that I would like
24 the Commission to pay attention to. First, the
25 technological, the is it safe, will it stay

1 underground, this is the scientist talking here.
2 And we have some very good news on that front, as
3 I understand it.

4 The second risk, which is more relevant
5 to the politicians and financial people in the
6 private sector that we need, we need the private
7 sector to partner with government to make this
8 happen, is whether someone's going to be stuck
9 with a big financial problem if something goes
10 wrong.

11 And so we're going to have to work out,
12 this is probably the biggest impediment to carbon
13 capture and sequestration is figuring out how to
14 apportion legal and financial risk for these very
15 very long-term projects that kind of exceed the
16 timeframe for normal human projects. Anywhere
17 from hundreds to more, maybe thousands, of years.

18 We have some analogs in the nuclear
19 industry, the Price-Anderson Act in the '50s dealt
20 with similar unknown, unquantified risk. And
21 that's the scary thing, I think, for everybody is
22 unquantified risk. The good news is we're
23 starting to quantify it, we have some very good
24 quantification going on on the technical side.

25 And if we can just figure out how to

1 transfer -- one of the plans, I think, that is
2 very prevalent is that the private sector would
3 supervise and be responsible and liable for the
4 first 10 or 20 years during which the carbon and
5 the CO2 is injected.

6 After that period there would be a
7 possibility of transferring liability to the
8 government entity that is supervising that,
9 whether it's the state or federal or other. But
10 only on the condition that all the milestones have
11 been met and that there is good monitoring and
12 assurance that the well has been capped, and that
13 all the proper safeguards are in place that it is
14 responsible for government to take over liability
15 at that point. And if they haven't been, probably
16 shouldn't take it over.

17 One more point I'll make is that because
18 this is, I believe, going to be so prevalent in
19 the headlines increasingly in the short term and
20 long term, to use the proper terminology. I've
21 been saying saline aquifer because in California
22 we have these huge saline formations underground
23 that have quite a lot of storage capacity for
24 carbon dioxide.

25 I learned to say saline reservoir as a

1 more accurate and less hot-button term because the
2 public, I believe, identifies aquifer with
3 drinking water. And this is not drinking water
4 that we'll inject this into, this is brine. And I
5 think saline reservoir is a more accurate term to
6 use.

7 Greenpeace's statement that we believe
8 renewables and other options can meet our needs
9 was backed up with -- I heard no facts to back
10 that up. It seemed to be wishful thinking. And
11 so, I think many of the hearts in the room were
12 with Greenpeace, but not many of the minds.

13 I'll quickly go over these regulatory
14 developments and then I'll wrap this up. Whatever
15 regulations are going to be developed must be
16 flexible because we don't know enough about this
17 yet at the demonstration stage to write perfect
18 regulations.

19 Good news is Wyoming has passed House
20 Bill 89 and 90, and I met the Legislator that
21 passed that. He handed me a copy of them. HB-89
22 specifies that ownership of a pore space is with
23 the surface owner, not the mineral rights owner.
24 HB-90 in Wyoming puts the responsibility for this
25 oversight into their department of environmental

1 quality rather than oil and gas. That'll be
2 relevant in California as we go into regulations.
3 That might be a better route to go because oil and
4 gas is a different type of technology than
5 sequestration. Similar, but it has its
6 differences.

7 The USEPA is publishing in July of this
8 year proposed new regulations for underground
9 injection control under the Safe Drinking Water
10 Act. That'll be a huge step forward. I have the
11 cite for anybody that needs to look that up.

12 I'd like to conclude about WESTCARB III
13 that I've been tremendously excited about this. I
14 think it's an opportunity that the Commission
15 should not and cannot pass up. There are definite
16 legal risks and financial risks with it. I think,
17 just my personal opinion, they're manageable. I
18 think they fit well with the Governor's
19 environmental outlook and AB-32. We can work very
20 hard to minimize those risks.

21 But one of the points of a demonstration
22 project is to take risk, because you can't do it
23 without some risk. The risk of doing nothing, in
24 my opinion at least, is probably far outweighs
25 whatever risk is involved in doing the

1 demonstration project.

2 Anyway, to conclude, it's here now. And
3 it's not going to probably go away. We have an
4 opportunity here to do this project. There's a
5 chicken-and-the-egg problem with the laws. We
6 can't fix the laws until we know the demonstration
7 project. And we can't really do the demonstration
8 project without the guidance of the laws. So
9 there's a little bit of a stalemate going on
10 everywhere.

11 There were no solutions in that room to
12 that, other than going forward with demonstration
13 projects and seeing what happens to the plume.
14 Seeing if it migrates farther than we think it
15 will. Seeing if there's any legal issues. Seeing
16 if there's regulatory issues. And that's the way
17 we'll get answers to this question.

18 Are there any questions about the
19 conference that I can answer?

20 COMMISSIONER ROSENFELD: I just want to
21 thank Bill Chamberlain and you for beginning -- I
22 shouldn't say beginning for Bill, sorry -- for
23 taking an interest in this crucial problem.

24 And I think beginning to take -- think
25 about the equivalent of Price-Anderson guarantees

1 to make private sector more comfortable in getting
2 into this field is very very important.

3 And to emphasize your point, and even if
4 it's only for 100 years, by golly we need that 100
5 years. We need everything we can get, so bless
6 you guys for putting time into it.

7 MR. CHAMBERLAIN: I'm sorry Commissioner
8 Douglas couldn't be here. She spoke to our staff
9 meeting a few weeks ago when she first got here,
10 and indicated that while she understands the
11 arguments from environmental groups that, you
12 know, this is potentially adversely affecting
13 renewables et cetera, she understands that in the
14 world perspective there are so many areas,
15 including China, including India, where coal will
16 be used, that unless we develop --

17 COMMISSIONER ROSENFELD: Well, is being
18 used to the extent of two billion tons a year.

19 MR. CHAMBERLAIN: Right. I remember
20 seeing at the last committee on regional electric
21 power cooperation meeting a slide that showed two
22 clouds, one small one and one large one. The
23 small one represented all the emissions of CO2
24 from the California electricity system. The large
25 one represented the emissions from the coal plants

1 that had been developed in China just in the year
2 2006. And it was three times as big.

3 So, this technology is sort of the hope
4 for, at least the next 100 years or two. And
5 hopefully we will eventually get to a completely
6 sustainable system.

7 COMMISSIONER BOYD: Let me jump in here
8 a little bit and thank you, Bill, and thank you
9 for the presentation. I must have ten years
10 invested in carbon capture and storage, both
11 geologic and terrestrial. And in the beginning
12 geologic was seen as the -- while terrestrial is
13 very popular because it saves forests, et cetera,
14 geologic seemed maybe a quicker route.

15 But as you've all seen it's taken a long
16 long time and these studies and all the points,
17 all the hurdles, roadblocks that were pointed out
18 in the presentation have been hurdles and
19 roadblocks that's been tough for this agency to
20 deal with in conducting even phase one, phase two.
21 And having the courage to even bother to ask for
22 phase three, because this is a real challenge to
23 conventional government approaches to things.
24 But I think this agency's up to the challenge.

25 One of the concerns I've had for the

1 last few years here is that people who ar really
2 deep into coal say, oh, we got carbon capture and
3 storage, so let's move forward. And yet, as you
4 see, we're still conducting the research and
5 development.

6 It's true, a lot has gone on for years
7 with regard to capturing CO2 and injecting it into
8 the ground to help oil recovery and what-have-you.
9 Here in California I've noted that the many times
10 we've tried to initiate some of our projects we're
11 met with, I think, the unstated liability concerns
12 of many of the potential participants. The oil
13 industry, in particular, has been pretty shy about
14 this. They've conducted their own, but when it
15 comes to venturing in with government, they've
16 been fairly skittish about it.

17 The more obvious places, I mean, more
18 easily demonstrated public as safe is evacuated
19 natural gas reservoirs. But we even have trouble
20 getting in there.

21 So, I'm all for what the staff here is
22 doing. The problem is everybody's predicated the
23 solution on the use of coal, and the carbon
24 problem on this silver bullet of carbon capture
25 and storage geologically. And we do need the

1 research.

2 Melissa, you might want to think about
3 having some kind of -- in your series of
4 educational things, a session here on coal and all
5 that it means, electricity generation, carbon
6 capture and storage. I mean there's a lot of
7 knowledge in this organization throughout various
8 facets of it on this subject.

9 And I should have earlier introduced my
10 new second Advisor, Kelly Birkinshaw, who happens
11 to be personally very knowledgeable on this
12 subject, influenced me to pirate him away as one
13 of my Advisors.

14 But, nonetheless, the recent efforts, 18
15 months this agency invested in the Western
16 Governors Association future fuels project got, as
17 I warned the Governor's Office as they recruited
18 me into this, got delayed more than six months by
19 the debate over coal. I mean in the western
20 states there are a couple of coal states, just
21 like in the east.

22 And, you know, turning coal into a
23 liquid synthetic fuel becomes obviously quite a
24 debate. And it was tough for us to deal with that
25 question and get a report that was more or less a

1 consensus. But it's out there.

2 Just within the last couple of weeks
3 staff here put a lot of effort, as Melissa knows,
4 into reviewing the Western Governors Association
5 draft coal report, which apparently we had no role
6 in originally preparing and reviewing, which
7 seemed very ignorant of the work going on in
8 California.

9 We submitted our comments to the
10 Governor's Office. And I was pleased to learn
11 that they submitted them as California's comments
12 lock, stock and barrel just recently. And, you
13 know, California has issues over coal.

14 But I would point out the NRDC, as
15 members of the National Energy Report a few years
16 ago, representing some environmental
17 organizations, swallowed hard and accepted coal as
18 inevitable in the generation of electricity. But
19 they drew the line there.

20 So when we started talking about liquid
21 fuels they weren't going to budge. They'd
22 conceded on coal and electricity generation in our
23 nation's future only with appropriate carbon
24 capture and storage and what-have-you.

25 So it is on the table. Where it will go

1 in the future remains to be seen. But there is a
2 rush to assume that we're going to solve this
3 problem quickly, and yet because of liability,
4 perception concerns and what-have-you, this is
5 moving very slowly. And it needs to move; it
6 needs to move more sprightly, as Commissioner
7 Rosenfeld said, it's got to be part of the bridge
8 to some future.

9 But, by the same token I've become more
10 and more a fan of terrestrial sequestration, i.e.,
11 save the forests, which now looks to me like a,
12 you know, a first phase quicker path maybe to
13 solve some of the immediate problems while they
14 try to work out geological carbon capture and
15 sequestration.

16 Nobody's going to want one of these in
17 their backyard. Even though you can prove
18 scientifically, as you saw data, that some of the
19 reservoirs are incredibly safe, saline reservoirs,
20 natural gas reservoirs. The public is going to be
21 quite concerned about what's going to happen to
22 this. And so it's going to be a long, hard sell.

23 In any event, it's -- but it might not
24 be bad to share the knowledge. I'm glad Bill's
25 office is into this. Michael could learn more

1 from some of our staff and people vice versa on
2 this.

3 I just hope we can move that WESTCARB
4 project forward, because in WESTCARB II we ran
5 into our own internal bureaucratic problems with
6 sister state agencies and state processes. And
7 this is a big charge, there's a lot of money.
8 This is a huge job and we're going to need a lot
9 of help from the system in order to make this
10 thing work.

11 Anyway, a few points on the subject.

12 CHAIRPERSON PFANNENSTIEL: Thanks,
13 Michael, and thanks, Bill, for bringing this up.
14 Clearly we all know that there's a lot of coal in
15 the planet. And people are using coal everywhere
16 because it's cheap. And I think that we attempted
17 this past IEPR to have enough discussion on coal
18 to bring out the facts so that we would better
19 understand where we are today.

20 And I know I concluded from that, I
21 think the IEPR report concluded from that that
22 carbon capture and sequestration, as a technology,
23 exists. But it still has a lot of uncertainty
24 around it. And it's fundamentally expensive.

25 And so when you're talking about clean

1 coal today, you're talking about something that's
2 more expensive than other alternatives. And so
3 CCS is only going to be the bridge, if we can get
4 the cost of that down. And I think that's why
5 we're in this project right now.

6 I'm a little less optimistic, I think,
7 than many others about getting the cost down. But
8 I think if we are able to do it, even as an
9 expensive option, it may end up being a technology
10 that helps us with other expensive technologies
11 that are going to get us there.

12 Anyway, enough. Thank you both very
13 much for bringing this to us.

14 MR. DOUGHTON: It's my pleasure, and
15 thank you for your time.

16 CHAIRPERSON PFANNENSTIEL: Mr.
17 Chamberlain, further report?

18 MR. CHAMBERLAIN: No, Madam Chairman.

19 CHAIRPERSON PFANNENSTIEL: Thank you.

20 COMMISSIONER BOYD: Madam Chair, might I
21 go back under Commission Committee et cetera just
22 to mention something I should have. And this
23 reminded me of it.

24 One, it's a lot of good research that
25 this agency has done in the past even before I got

1 here, but helps on the subject we were just
2 discussing, but on the climate change in general,
3 this agency's done a lot of good research that
4 you're aware of.

5 The Climate Action Team had an aborted
6 effort underway in the last year to address
7 research and development. I say aborted because
8 they suspended it last year. But they've asked
9 that it be reincarnated and restarted. And
10 they've asked me to chair the CAT subgroup on
11 research and development, which I've reluctantly
12 agreed to do.

13 The reluctance is just the workload, the
14 willingness to do it is to help this agency
15 continue its position in this particular arena.
16 And secondly, the Resources Agency has been
17 commissioned to particularly pursue adaptation as
18 one of the things that needs to be addressed.
19 Mitigation and adaptation are the two tracks of
20 the whole climate change effort.

21 And once again they've recruited
22 heavily, heavily on us to help them with that
23 commission. So we will be involved with that.

24 So we remain deeply involved in climate
25 change activities.

1 CHAIRPERSON PFANNENSTIEL: Thanks, Jim.

2 Melissa?

3 EXECUTIVE DIRECTOR JONES: I just wanted
4 to do a brief report on where we are with the
5 budget. We've been going through Senate and
6 Assembly subcommittee hearings. The Assembly has
7 now approved all nine of our BCPs.

8 The Senate has denied several, which
9 we'll be taking them into conference committee.
10 The two that were approved are for implementing
11 the PIER natural gas research program and the New
12 Solar Homes Partnership, the outsourcing of that
13 administration.

14 There's still one item open which is the
15 AB-118 BCP which will be heard in the Senate
16 tomorrow. So we are getting ready to go to
17 conference committee for some of these budget
18 items. I prepared a list for you so you can see
19 what the votes were, and what the status is.

20 COMMISSIONER ROSENFELD: Melissa, can
21 you do this in a little more detail?

22 EXECUTIVE DIRECTOR JONES: Sure.

23 COMMISSIONER ROSENFELD: Your very
24 useful sheet shows additional PYs requested as
25 39.5 at the bottom.

1 EXECUTIVE DIRECTOR JONES: Um-hum.

2 COMMISSIONER ROSENFELD: Now you just
3 mentioned a much smaller number.

4 EXECUTIVE DIRECTOR JONES: Out of the
5 39, the two that have been approved include 3 PY.

6 COMMISSIONER ROSENFELD: So there's a
7 lot more to come?

8 EXECUTIVE DIRECTOR JONES: Yes. A lot
9 more will be considered in conference committee.

10 COMMISSIONER BOYD: Melissa, are they
11 talking about any timetable for when they think
12 they might go to conference?

13 EXECUTIVE DIRECTOR JONES: We've heard
14 no discussion yet.

15 COMMISSIONER BOYD: I'll be really
16 interested in the 118 debate --

17 EXECUTIVE DIRECTOR JONES: Yes.

18 COMMISSIONER BOYD: -- tomorrow. I mean
19 because in reality I think our budget is co-joined
20 with a piece of cleanup legislation --

21 EXECUTIVE DIRECTOR JONES: Um-hum.

22 COMMISSIONER BOYD: -- that Senator
23 Lowenthal wants to see pass before he lets go.
24 Tomorrow might be a little early for there to be
25 action. We'll see.

1 EXECUTIVE DIRECTOR JONES: And the ones
2 that we're most concerned about are the BCPs to
3 deal with the building and appliance standards.
4 We need additional staff in those areas if we're
5 going to meet the challenges. And, again, AB-118
6 is very important to us.

7 I should also let you know that in the
8 May revise, the Governor's May revise, they are
9 proposing a loan from the renewables trust fund of
10 \$10.9 million. That was approved in the Assembly
11 yesterday. I made a case that that cuts beyond
12 that would begin to have program impacts on both
13 the New Solar Homes Partnership and meeting RPS.
14 So we'll have to see where that goes. But as of
15 now, that 10.9 will be a loan to be repaid by
16 2013.

17 COMMISSIONER BOYD: Melissa, what is the
18 track record of the state with regard to paying
19 back this agency on loans that it has given?

20 EXECUTIVE DIRECTOR JONES: As I heard it
21 described by staff, they have borrowed up to I
22 think it was 150 million, the great majority of
23 which has been paid back. I understand there was
24 a loan for 18 that still hasn't been paid back,
25 some years ago.

1 COMMISSIONER BOYD: I'm encouraged.

2 CHAIRPERSON PFANNENSTIEL: But they
3 recently paid back some of the renewable money I
4 think, last year.

5 Anything else?

6 EXECUTIVE DIRECTOR JONES: I think
7 that's it.

8 CHAIRPERSON PFANNENSTIEL: No Leg
9 Director report since Marni's over at the Senate
10 hearing, I believe.

11 EXECUTIVE DIRECTOR JONES: Um-hum.

12 CHAIRPERSON PFANNENSTIEL: Public
13 Adviser report, Nick?

14 MR. BARTSCH: Madam Chair, Members, Nick
15 Bartsch, Public Adviser's Office. We don't have
16 anything new for you to report. Thank you.

17 CHAIRPERSON PFANNENSTIEL: Thank you.

18 COMMISSIONER BOYD: Madam Chair, one
19 other item I neglected, Melissa reminds me by her
20 comments on AB-118. Day before yesterday
21 Commissioner Douglas and I held the first meeting
22 of the AB-118 advisory committee. We held it here
23 in this room. The advisory committee that the law
24 set up to advise this agency on developing an
25 investment plan for how to invest the money.

1 It's a pretty good sized group. It's a
2 good group of folks. We had a very interesting
3 meeting. And although we ran into a couple of
4 issues that will take some discussion to iron out,
5 the law suggests at least three meetings, a few
6 members want more than three meetings because of
7 some of the issues.

8 But I think we will make pretty decent
9 progress on --

10 COMMISSIONER ROSENFELD: Three meetings
11 means three meetings a year?

12 COMMISSIONER BOYD: Three meetings a
13 year. This is a group that has to help advise us
14 on an investment plan every year for the seven and
15 a half years, current seven-and-a-half-year life
16 of this program.

17 I personally suspect there might be some
18 wheeling and dealing about this program that could
19 actually add some time to it in the future. But,
20 that remains to be seen. It'll also cost some
21 money on the front end.

22 But nonetheless, we're off and running.
23 And it's a good cross-section of folks. The Auto
24 Alliance, which represents the auto industry, did
25 resign just in advance of our first meeting,

1 deciding that the perception of their
2 participation could be problematic for their
3 industry. As you know, we have pretty strict
4 rules about participation in the advisory
5 committee, and nobody participates, their agencies
6 can't receive funding. And that did cause a lot
7 of the folks who originally thought they were
8 going to be members of the advisory committee, to
9 decline that opportunity for fear that some of
10 their affiliates or themselves would not be
11 allowed to get into the program sometime in the
12 future. But, actually we feel that a very good
13 advisory committee.

14 As I said, there's a few technical
15 arguments about the role of certain fuels in our
16 future. And the mere shadow of coal lurks in this
17 room, even in discussions of liquid fuels in the
18 future, and petroleum coke, which is seen also to
19 be the equivalent of coal.

20 In any event, we had our first meeting.
21 We met for roughly half a day. We decided future
22 meetings better go more or less an entire day, or
23 we truly will be having to have a long series of
24 meetings. But next meeting's likely to be in
25 early July.

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 26th day of May, 2008.

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