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

THURSDAY, SEPTEMBER 14, 2006

10:04 A.M.

Reported by:
Peter Petty
Contract Number: 150-04-001

COMMISSIONERS PRESENT

Jackalyne Pfannenstiel, Chairperson

James D. Boyd

Jeffrey D. Byron

STAFF and CONTRACTORS PRESENT

B.B. Blevins, Executive Director

Arlene Ichien, for Chief Counsel Chamberlain

Dick Ratliff, for Chief Counsel Chamberlain

James Reede, Jr.

Atlas Hill

Angela Gould

Michael Lozano

Brian Ellis

Dora Yen-Nakafugi

Jamie Patterson

Michael Seaman

Melinda Dorin

Donna Stone

Paul Kramer

PUBLIC ADVISER

Nick Bartsch for Margret Kim

ALSO PRESENT

Allan J. Thompson, Attorney
on behalf of Panoche Energy Center

ALSO PRESENT

Merwin Brown, Director, Transmission Research Program
California Institute for Energy and Environment

Noel Davis
Chambers Group

Peter Raimondi
University of California Santa Cruz

Eric Pendergraft
AES Huntington Beach, LLC

John Steinbeck
Tenera Environmental

D. Shane Beck
MBC Applied Environmental Sciences

Tom Luster (via teleconference)
California Coastal Commission

Rick R. Rothman, Attorney
Bingham McCutchen, LLP

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P R O C E E D I N G S

10:04 a.m.

CHAIRPERSON PFANNENSTIEL: This is the Energy Commission business meeting of September 14th. Please join me in the Pledge of Allegiance.

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

CHAIRPERSON PFANNENSTIEL: We have a couple of agenda modifications to start with. We're going to move consideration of item number 2, Huntington Beach, to the end of the agenda. I think that the rest of the agenda will move fairly expeditiously, so I think we'll move that to after item 14 on the agenda.

Item 13 has been held for the next business meeting, so that will not be considered today.

Begin with the consent calendar; do I have a motion for the consent calendar?

COMMISSIONER BOYD: Move consent.

COMMISSIONER BYRON: Second.

CHAIRPERSON PFANNENSTIEL: In favor?

(Ayes.)

CHAIRPERSON PFANNENSTIEL: Consent calendar is approved.

Moving on to item number 3a, possible approval of the Executive Director's data adequacy recommendation for the Vernon Power Plant, a 943 megawatt combined cycle facility in the City of Vernon, Los Angeles County. Dr. Reede.

DR. REEDE: Good morning, Chairman Pfannenstiel and Commissioners. My name is Dr. James Reede. And the staff has completed its data adequacy review of the Vernon Power Plant project application for certification and supplements A and B, submitted on August 25th and September 8th.

Staff has determined that the AFC and the supplements contain all the information required by California Code of Regulations, Title 20, section 1704, including appendix B for the 12-month AFC process.

We have received comments from other agencies. The South Coast Air Quality Management District has indicated that the air permit application is complete as of July 28, 2006.

And L.A. County Department of Public Works, Watershed Management Division and Los Angeles Department of Water and Power have both raised concerns regarding the applicant's transmission line routes.

Caltrans has also expressed concerns related to the proposed transmission lines crossing of Interstate 710.

Finally, the Southern California Association of Governments submitted a no-comments letter.

Staff recommends that the Energy Commission accept the application for certification and please appoint a Committee to oversee this proceeding.

CHAIRPERSON PFANNENSTIEL: Thank you, Dr. Reede. Is there further discussion on that item?

Do we have a motion to approve the Executive Director's recommendation?

COMMISSIONER BOYD: I'll move approval.

COMMISSIONER BYRON: Second.

CHAIRPERSON PFANNENSTIEL: In favor?

(Ayes.)

CHAIRPERSON PFANNENSTIEL: So item 3a has been approved.

3b is possible Committee assignment for the Vernon Power Plant project. That possible Committee assignment is myself as Presiding Commissioner, and Commissioner Boyd as Associate.

Is there a motion for that Committee?

COMMISSIONER BYRON: I'll move that item.

COMMISSIONER BOYD: I'll second it.

CHAIRPERSON PFANNENSTIEL: In favor?

(Ayes.)

CHAIRPERSON PFANNENSTIEL: So the Committee has been assigned. Thank you.

DR. REEDE: Thank you, Chairman Pfannenstiel.

CHAIRPERSON PFANNENSTIEL: Item 4, possible approval -- 4a, possible approval of the Executive Director's data adequacy recommendation for the Panoche Energy Center, a nominal 400 megawatt simple cycle facility located in unincorporated western Fresno County. Dr. Reede, again.

DR. REEDE: Good morning, again, Chairman Pfannenstiel. I'm still Dr. James Reede. The staff has completed its data adequacy review of the Panoche Energy Center application for certification submitted on August 2, 2006.

Staff has determined that the AFC does not contain all the information required by the California Code of Regulations, Title 20, section

1704, including appendix B for the 12-month AFC process.

Twenty-three technical disciplines were reviewed, and information is still needed in ten areas: air quality, biological resources, geological hazards, land use, paleontological resources, project overview, reliability, socioeconomics, transmission system engineering and water resources.

The attachments included with your packet include the worksheets of whether each technical discipline evaluated is adequate or inadequate. We have not received written comments from the San Joaquin Valley Air Pollution Control District yet. However, they have indicated that they received the air permit application as of August 10, 2006.

We have received information from the U.S. Environmental Protection Agency stating that the applicant will require an underground injection control permit. They will also require a permit from the Regional Board.

On the issue of water resources, the applicant did not provide characterization of the water being used, nor of the deep injection well

that they are proposing. We see this as a major impediment to them eventually reaching data adequacy.

The U.S. Bureau of Reclamation has approached the Energy Commission with a proposed solution for their use of cooling water; and staff has also developed a zero liquid discharge scenario that if the applicant would consider, may be able to move the project forward.

At this meeting staff is recommending that the Energy Commission not accept the AFC until all the additional information specified in attachment B is supplied.

Pursuant to California Code of Regulations, Title 20, section 1709(c), if the Commission accepts staff's recommendation you may use the attached data adequacy worksheets to indicate in writing those parts of the AFC that fail to meet the information requirements and the manner in which it can be made complete.

Staff recommends that the application be determined to be data inadequate.

CHAIRPERSON PFANNENSTIEL: Thank you. And for the applicant?

MR. THOMPSON: Yes, thank you very much.

My name is Allan Thompson, Project Counsel for the project.

We accept the data inadequacy determination recommendation by staff in the listed areas. And we are working diligently to compile that information and submit it. For example, the EPA permit hopefully is being filed as we speak.

I'm not going to comment on the proposed fixes by staff. We will see those in due time and consider them. But I wanted you to know that we are working on them hard, and we'll get them in as soon as we can.

Thank you.

CHAIRPERSON PFANNENSTIEL: Thank you, Mr. Thompson. I'm wondering whether there is any estimate from the applicant on when we might see this as data adequate?

MR. THOMPSON: We are targeting the end of the month. And target dates are only that, target dates. Part of the recommendations are that we get data adequacy statements from the EPA on the deep well injection permit, and from San Joaquin on the air permit.

So part of the unknowns in the data

acquisition effort are getting other agencies' approvals that we have submitted sufficient information for their review, as well.

CHAIRPERSON PFANNENSTIEL: I understand. Thank you. So we'll take no action on that item then at this time. Thank you, both.

COMMISSIONER BOYD: I think we have to move approval of the staff recommendation to find the application data inadequate, and I'll make that motion.

COMMISSIONER BYRON: I'll second it.

CHAIRPERSON PFANNENSTIEL: Thank you.

All in favor?

(Ayes.)

CHAIRPERSON PFANNENSTIEL: We have moved that.

Item 5, possible approval of purchase order 06-433.00-008 for $250,000 to Enterprise Network Solutions, Inc., for technical support and integration of computer-related technologies into the Energy Commission's information technology structure. Good morning.

MR. HILL: Good morning. My name is Atlas Hill; I'm with the information technology services branch.

We are asking for the approval of a purchase order contract with Enterprise Network Solutions to provide technical support, assistance with planning, installing and operational training for state employees.

All of this is for the integration of computer-related technologies into the Energy Commission's information technology infrastructure.

Examples of these computer-related technologies requiring professional services would be the expansion of our uninterruptible power supply, or UPS system; our computer-cooling system; installation of standard computer racks; expansion of our data network, data communication network; service co-location support; and last but not least, independent performance and security technology audits.

CHAIRPERSON PFANNENSTIEL: Thank you. Are there questions? Discussion?

COMMISSIONER BOYD: Move approval.

COMMISSIONER BYRON: Second.

CHAIRPERSON PFANNENSTIEL: In favor?

(Ayes.)

CHAIRPERSON PFANNENSTIEL: Thank you.

MR. HILL: Thank you.

CHAIRPERSON PFANNENSTIEL: Item 6, possible approval of purchase order 03-05-70-0471D for $55,100 to Public Sector Consultants, Inc. for an independent project oversight consultant to provide project oversight services for the Western Renewable Energy Generation Information System project. Good morning.

MS. GOULD: Good morning. My name's Angie Gould; I'm from the renewable energy office. And I'm presenting the WREGIS independent project oversight consultant contract for your approval.

The WREGIS project is being established in response to California legislation that requires the Energy Commission to develop a system to track renewable energy generation, to verify compliance with California's RPS.

WREGIS will assist in verifying compliance with renewable energy programs in the western interconnect, and help insure that renewable energy output is counted only once.

And this contract is for an independent project oversight consultant or IPOC. And they will help insure that WREGIS is completed within scope timeline and estimated budget. And this

consultant is required by the Department of Finance for this project.

Public Sectors Consultants' proposal was selected as the winning bidder for a ten-month term from September 2006 to July 2007. We ask that the Energy Commission approve this contract.

CHAIRPERSON PFANNENSTIEL: Thank you, Ms. Gould. Questions? Commissioner Byron.

COMMISSIONER BYRON: Excuse me. Ms. Gould, do you know, are there more WREGIS contracts coming?

MS. GOULD: One more.

COMMISSIONER BYRON: Okay.

MS. GOULD: In two weeks.

COMMISSIONER BYRON: Thank you.

CHAIRPERSON PFANNENSTIEL: Further questions?

COMMISSIONER BOYD: Move approval.

COMMISSIONER BYRON: Second.

CHAIRPERSON PFANNENSTIEL: All in favor?

(Ayes.)

MS. GOULD: Thank you.

CHAIRPERSON PFANNENSTIEL: Thank you, it's been approved.

Item 7, possible approval of contract

500-06-015 for $284,969 with the Gas Technology Institute to demonstrate a new cost-effective, high-efficiency, low-emission, gas-fired radiant-tube technology used extensively in heat-treating industries. Good morning.

MR. LOZANO: CEC contract manager Michael Lozano. Good morning.

Increases in the price of natural gas and increasingly stringent emissions requirements have demonstrated the need for more efficient sources of metals heating and melting.

One of the technologies for process heating for the ferrous and nonferrous metals industry is a single-ended radiant tube, also known as a SERT.

Gas Technology Institute and North American Manufacturing Company have developed a new technology called the reverse annulus single-ended radiant tube, the RASERT.

The two relevant RASERT technologies are more uniform heat distribution through the tube, which increases thermal efficiency to 68 percent from approximately 42 percent. And decreases associated NOx formations from about 140 ppm to 70 ppm.

The goals of this agreement are, one, to collaborate with the host site, California Steel Industries, for technology deployment; conduct repeated performance verification analysis of the RASERT prototype; fabricate ten commercial RASERTs for deployment purposes; carry out information gathering of the installed RASERTs to confirm performance metrics; and establish a technology transfer and commercialization plan.

The proposed project represents an investment of the public funds in the amount of $285,000 over a period of two years. Matched funding in the amount of $171,000 has been pledged by the partners. The 285,000 will be funded out of the '06 natural gas research program budget of $15 million, which is 2 percent of the budget.

I'm recommending that this project be adopted.

CHAIRPERSON PFANNENSTIEL: Are there questions?

COMMISSIONER BOYD: I will move approval; and just comment that I am impressed with the potential to reduce NOx emissions by 50 percent. Our air quality community look very anxiously to this, should it prove successful.

Good luck.

MR. LOZANO: Thank you.

COMMISSIONER BYRON: And I second it.

CHAIRPERSON PFANNENSTIEL: All in favor?

(Ayes.)

CHAIRPERSON PFANNENSTIEL: It's been approved; thank you.

Item 8, possible approval of contract 500-06-018 for $950,458 with the Gas Technology Institute to demonstrate a cost-effective, high-efficiency, gas-fired, drum dryer that produces lower NOx emissions for use in the food and dairy industries. Mr. Lozano.

MR. LOZANO: Contract manager Michael Lozano, again. Good morning. Increases in prices of natural gas and emissions requirements again have demonstrated a need for efficient sources of food process heating. GTI, Flynn Burner Corporation and Groupe Lapperier and Verreault, the dryer manufacturers and partners, have developed a new gas-fired food-drying system, the high-efficiency drum dryer, with the goal of increased energy efficiency and reduced emissions.

Dryer efficiencies targeted at 75 to 85 percent; and currently it is 60 to 70 percent.

NOx emissions are targeted at less than 50 ppm versus conventional steam-generated systems of greater than 100 ppm.

The project utilizes unique heat-transfer designs in a novel burner configuration. The components of the system have been developed and proven in the laboratory. CEC proposes to partner with GTI, its partners and Southern California Gas to demonstrate this drum dryer at a site in southern California.

The proposed project represents an investment of public funds in the amount of $950,458 for a period of three years. Matched funding in the amount of $561,000 has been pledged by the partner. The 950,000 will be funded out of the '06 natural gas research program budget of 15 million. It constitutes 7 percent of the budget.

I am recommending that this project be adopted.

CHAIRPERSON PFANNENSTIEL: Thank you. Discussion?

COMMISSIONER BYRON: I'll move the item.

COMMISSIONER BOYD: I'll second.

CHAIRPERSON PFANNENSTIEL: In favor?

(Ayes.)

CHAIRPERSON PFANNENSTIEL: The item has been approved. Thank you, Mr. Lozano.

Item 9, possible approval of contract 500-06-019 for $250,000 with Gas Technology Institute to validate a new instrument capable of measuring the isotopic composition of methane in ambient air. Good morning.

MR. ELLIS: Good morning, Commissioners. I'm Brian Ellis; I'm the CEC contract manager. I'm seeking approval for a research that's going to be the field testing and third-party validation of a new instrument with the unprecedented ability to measure in real time the isotopic composition of methane in ambient air.

And this technology is important because different sources like landfills or natural gas pipelines will emit methane with different signature isotopic compositions. And basically what that means is that the ratio of carbon 12 to carbon 13 in the methane emitted.

In theory, this instrument would enable a regional monitoring of the proportional contribution of different sources to methane emissions. And this kind of environmental forensics could lead to critical feedback to our

methane emissions estimates in the California inventory, which is known to contain significant uncertainties.

So no instrument currently is able to do this, to measure the isotopic composition in real time that's commercially available. And this does represent a significant technical roadblock in these kinds of studies.

So the goal of this research, besides the testing of this new instrument, is to position the new instrument's developer, which is GTI, to collaborate in future California-specific studies with LBNL, the Lawrence Berkeley Labs and NOAA, both of whom have expressed interest in the technology and are going to be the ones that are third parties validating it for us.

If the instrument proves functional it could be used both in stationary monitoring projects, or mounted on aircraft, vehicles, and moved around. It could additionally be adopted to measure CO2 and methane.

And the ability to take real-time field measurements like these would enable the California inventory to be checked and greatly refined. And a California Climate Action Team

identified method for reducing greenhouse gas emission, which is reducing methane from landfills. This would definitely help with that.

CHAIRPERSON PFANNENSTIEL: Thank you. It sounds like a great breakthrough. Any questions? Discussion?

COMMISSIONER BOYD: I'll move the item, and I'm very impressed with the concept. I hope you're successful, because we're certainly in the greenhouse gas arena big-time. And this agency is really trying to mine that resource, landfill gas.

COMMISSIONER BYRON: I continue to be amazed at this organization. I hope this is also successful. I second it.

CHAIRPERSON PFANNENSTIEL: All in favor?

(Ayes.)

CHAIRPERSON PFANNENSTIEL: It's been approved, thank you.

MR. ELLIS: Thanks.

CHAIRPERSON PFANNENSTIEL: Item 10, possible approval of contract 500-06-017 with the U.S. Department of Energy, Lawrence Livermore Laboratory, for $350,000 to develop an interactive web-based tool that consolidates renewable resource data into a geographic information system

format suitable for integrated renewable siting, planning and assessment. Good morning.

MS. YEN-NAKAFUGI: Good morning, Commissioners. My name is Dora Yen and I'm the technical lead for the wind resource program under the PIER R&D program. And I'll be presenting this item on behalf of Michael Kane.

We're seeking approval for research with Lawrence Livermore National Lab's DOE facility to develop an interactive web-based tool that will enable us to consolidate the renewable resource data, the current data that has been developed via PIER research, as well as other updated information from other state agencies in other research projects, into a GIS information format that will also enable and support analytical capability.

To, at the same time, allow us to look at renewable resources in an integrated fashion, whether it's wind, geothermal, biomass; and also encourage the sharing of the information amongst all the infrastructures, whether it be the Universities of California, the research facilities, the general public. And then also to support the buildout of our California GIS

information infrastructure.

It's very important that the information that we currently use for research is validated and is current, and submitted in a timely fashion. And the attractiveness of this GIS platform is that the information can be shared across all platforms. And a web-based tool allows us to do analysis without having to be a GIS expert.

So, for those reasons, we support the approval of this project, as well as recommend that this is part of the portfolio of suggested projects in the 2005/2006 research R&D program.

CHAIRPERSON PFANNENSTIEL: Dora, is this the first web-based tool for the resource assessments? Or is this an update of something that already exists?

MS. YEN-NAKAFUGI: Last year we developed a demonstration portal just using wind information. And we found that that has been very useful for monitoring the implementation of wind resources; that's expanding at such a fast rate, that we have to get the information and disseminate it out as quickly as possible. So that demonstration portal will be expanded to include all the renewable resources.

And also to integrate other resources that may be impacted with the development of renewables. So, it's really an analytical tool base, not just producing maps.

CHAIRPERSON PFANNENSTIEL: And when do we think it will be available to be used by ourselves and the general public?

MS. YEN-NAKAFUGI: The portal will be released, if you will, in two phases. The first will be released internally for us to kind of use and make sure that it's user-friendly, and do some checks.

But it's planned to be released in two phases. This is currently planned for about an 18-month project development timeframe. It's scheduled out for 26 months right now. But the first release will be within the next nine months. And then -- because right now we're collecting all the information. There's still some resource assessments that are being completed at this time that we want to take advantage of.

CHAIRPERSON PFANNENSTIEL: Thank you. I'll look forward to being able to use it. Are there other questions?

Is there a motion?

COMMISSIONER BOYD: Move approval.

COMMISSIONER BYRON: And I second.

CHAIRPERSON PFANNENSTIEL: All in favor?

(Ayes.)

CHAIRPERSON PFANNENSTIEL: It's been approved, thank you.

Item 11, possible approval of PIER work authorization MR-054 for $599,467 with Virginia Polytechnic Institute and State University under the UC master research agreement number 500-02-004 with the Regents of the University of California, Office of the President/CIEE for advanced protection system using wide area measurements. Good morning, Mr. Patterson.

MR. PATTERSON: Good morning, Commissioners. I'm Jamie Patterson. I happen to be the Commission contract manager for the transmission research program under PIER.

Today we are looking for approval of this contract, of this actually work authorization in our master research agreement with Virginia Tech. It is entitled, advanced protection systems using wide area measurements.

What this is, this is actually adaptive relaying using phaser measurement units. The

transmission research program happened to have an area focused on the operation that primarily is advancing the technology of phaser measurement units. And we have brought forth several of these projects throughout, oh, I guess about past two or three business meetings that you have heard. And this is another one seeking the application of phaser measurement units in the valuable manner.

With me today I have Dr. Merwin Brown; he is the Director of the CIEE, the transmission research program. This particular project will be managed by CIEE. They manage all of our projects and provide the administration, implementation and planning for the transmission program.

Merwin, would you like to present this, the details of the project?

DR. BROWN: Okay, thank you, Jamie. I'm Merwin Brown with the California Institute for Energy and Environment and the University of California. And as Jamie said, Director of the Transmission Research Program in the PIER program.

As Jamie said, this project is another one that we're bringing forward to you for approval that is an application, developing an application of being able to use phaser

measurement units to improve the reliability of the grid. And in this particular case, to reduce considerably the possibility of an outage.

One of the things that we found in analyzing past outages is that we found that the modern grid has developed what might be called an auto-immune disorder, in which its protection system, which is the relays, actually have been found to make the situation worse rather than better.

It's a very complicated subject, but the simple answer, perhaps, as to why has been that the grid operators facing a very uncertain and changeable environment brought on by a number of things, new kinds of generators, the wholesale market situation, and even changes in the way customers use energy, has meant that the old way of using relays is what's created this problem.

This is going to attempt to use phaser measurements to be able to allow the operator to know in real time the condition of the grid over a wide area so that they can take action of one of two kinds.

For the old relays that are dumb and have to be manually reset, the operator can see a

condition coming and perhaps take action of another kind to prevent the possible outage if that relay were to be tripped and used.

Or, allow a lot of the new relays being bought today are smart relays. They have a communication system associated with them. In that case the operator or the system could potentially automatically change the setting of the relay so as not to cause a potential outage problem.

And so that's what this research project is all about.

CHAIRPERSON PFANNENSTIEL: Thank you. Are there questions?

COMMISSIONER BYRON: Yes.

CHAIRPERSON PFANNENSTIEL: Yes.

COMMISSIONER BYRON: Dr. Brown, could you just give me a brief explanation on how you coordinate this activity with some of the stakeholders? I assume the ISOs and the utilities are involved in some way?

DR. BROWN: Yes. First of all, on a routine basis, all these projects go through a number of I guess you would say scrutiny from the stakeholders, through our various advisory

committees, from the policy advisory committee, which is constituted by high-level people in the IOUs, the Cal-ISO, the CPUC. Commissioner John Geesman chairs that committee. And DOE sits on it.

Then we have technical advisory committees that also look at this, which are staffed by the technical manager levels of a lot of these companies. And sometimes we also bring in people from outside who can help us evaluate these things.

And then this project will also have a special committee put together with these stakeholders that will follow and review and comment on each of the tasks as they're done.

And then finally, if this all works out the way that the researchers believe it will, we're going to be asking the California IOUs and Cal-ISO to actually test this on their system. So that's our plan.

COMMISSIONER BYRON: Does it have potential application in other system operating regions throughout the country?

DR. BROWN: No reason why it couldn't. It's being designed for California; I mean that's

the target. But there are obviously similarities with grids across the nation. It will have greater application in the west, I believe, than it would in the east, only -- I mean it will be designed for that, realizing there is a difference in the eastern interconnection of the United States versus the western. But I suspect some of the fundamental research would be -- could be used across the nation.

COMMISSIONER BYRON: Thank you.

CHAIRPERSON PFANNENSTIEL: Is there a cost-sharing, Merwin?

DR. BROWN: At this particular stage, no. It's too much of a fundamental research and the risk is too high. So the only real cost sharing would be the fact that our stakeholders will pay for their participation in the project to review the work, et cetera.

CHAIRPERSON PFANNENSTIEL: Further questions?

COMMISSIONER BYRON: I'd be glad to move the item.

COMMISSIONER BOYD: Second.

CHAIRPERSON PFANNENSTIEL: All in favor?

(Ayes.)

CHAIRPERSON PFANNENSTIEL: Thank you.

DR. BROWN: Thank you.

CHAIRPERSON PFANNENSTIEL: Item 12, possible approval of an amendment for $395,577 to PIER work authorization MR-018 with the University of California Davis, under the UC Master Research Agreement number 500-02-004 with the Regents of the University of California, Office of the President/CIEE, for a project titled, California lighting technology hub for research and emerging technologies. Good morning.

MR. SEAMAN: Good morning, Commissioners. I'm Michael Seaman from the PIER buildings energy efficiency program.

Staff requests your approval for an amendment to an existing PIER-funded work authorization with the California Lighting Technology Center at UC Davis.

The amendment adds a new set of tasks that complement and are consistent with the purpose of the original work authorization.

California architects, builders and tradespeople, design professionals and utility program planners have difficulty finding current and credible information about energy efficient

lighting. While information on advanced lighting technologies exists, the information is hard to find and often not up to date.

Existing technology transfer mechanisms tend to fall short of addressing broader information-sharing needs. This problem is particularly acute for PIER-developed lighting products that would benefit from greater market acceptance that would follow from easy access to information about the benefits of their technology innovations.

This amendment tasks CLTC to collect and disseminate information about new research on energy efficient lighting, whether done by CLTC, California researchers, or others across the country and around the world. With the amendment CLTC will expand its outreach function to create a portal of information about energy efficient lighting research.

This portal will enable one-stop shopping by architects, building design professionals, lighting companies, builders and tradespeople for information about all research on energy efficient lighting.

This proposal has the following direct

benefits to California: It supports the loading order of efficiency and demand response by providing information on energy efficient lighting systems, controls and demand response technologies.

It supports the Governor's executive order to reduce overall electricity use by providing easily accessible information on energy efficient lighting solutions, and by informing green building and code processes.

And it provides California utilities, key energy efficiency partners and end users with convenient access to information they need.

The proposed amendment has been reviewed by the RD&D Policy Committee which has recommended that the Commission approve it.

Are there any questions?

CHAIRPERSON PFANNENSTIEL: I'm a big believer in trying to get the information out into those who will be using it, whether it's the architects and engineers and builders, or the general public.

And I'm very supportive of this, but I'm trying to -- I don't quite understand whether that information dissemination -- clearly, some of it

will be done through a web-based information hub. But then there's reference to there would be other sources of outreach. Will that be done by the Lighting Center, themselves? Or will they sub it out to a marketing firm? Or how do you expect that to be accomplished?

MR. SEAMAN: They'll be doing this in partnership with Southern California Edison. There will be an improved web site at CLTC. It will be mirrored at Edison. There will be lobby displays in both locations, northern and southern California. There would be an annual forum to acquire, to capture information on research needs. There will be a number of symposia tailored to the specific audiences. And there will be presentations and exhibits at trade shows.

COMMISSIONER BOYD: Question. The municipal utilities, how do we get information into their hands?

MR. SEAMAN: We're hoping that the information will get to whoever needs it. And if -- I'm certain that they'll be developing metrics to learn are we getting in touch with the people that we need to.

CLTC already has a pretty good track

record of reaching a targeted audience with a specific message. With this project they're enabled to go more broadly and more specifically to reach out to whatever targeted audiences need to be touched base with.

They're working in very close partnership with industry and with SMUD and with the IOUs. And everybody else is sort of coming along for the ride.

COMMISSIONER BOYD: Okay, with our new-found desire, if not responsibility, to work more closely with the municipal utilities, that being the CEC, I just want to make sure we build bridges to all these people with this kind of information. Because I agree with the Chairman, this is very helpful information. This is good stuff with regard to what this Commission is about.

So, thanks for your answer, Michael. And maybe on behalf of Commissioner Rosenfeld, I'll move approval.

COMMISSIONER BYRON: And I'll second it.

CHAIRPERSON PFANNENSTIEL: All in favor?

(Ayes.)

CHAIRPERSON PFANNENSTIEL: It's been approved; thank you.

Item 14, possible approval of two research proposals through the existing contract 500-04-025 with the San Jose State University and Moss Landing Marine Laboratory. Good morning.

MS. DORIN: Good morning, Commissioners; my name's Melinda Dorin and I'm the project manager for the once-through-cooling contract with Moss Landing Marine Labs over in PIER environmental area.

So, just as background. In 2005 we sent out an RFP under this contract. It was actually money that's been encumbered since May of 2005. And at the end of the year we sent out an RFP. And we've already begun five research proposals that we received under the RFP.

We did find that based on the technical review there were some research ideas that still needed to be developed. And we sought out two additional proposals to meet the data gaps that we didn't receive for the RFP.

So these are -- we had money left in the contract, so these are two additional research proposals. One is with Stratus Consulting and one is with UC Santa Cruz.

And they are looking at a variety of

tasks. One of the tasks is to look at the models that are used to develop the empirical transport model and the habitat production -- models that are used to calculate habitat restoration. And also there's cumulative impacts analysis and restoration tasks in the research.

And there isn't money -- because the money is already encumbered, it's not in the description. But the total money for both contracts is $292,000.

CHAIRPERSON PFANNENSTIEL: I'm sorry, $292,000?

MS. DORIN: -- two thousand dollars.

CHAIRPERSON PFANNENSTIEL: And can you tell me what the entire project is?

MS. DORIN: Sure. So the first one with UC Santa Cruz, that's the one looking at the models. And they're going to be looking at whether the models are used consistently. So sometimes they use the median and sometimes they use the mean. So, do analysis and look to see how the models are used.

And also another part of that research is to look at the target species, and resample, and look at different species and see if the end

result of the model is the same. That's one of the projects.

The other tasks Stratus Consulting is actually five, it's five tasks. One of those, like I mentioned, is cumulative impacts. And that's really a knowledge-gap analysis. So, looking at what's been done statewide for cumulative impacts and how to design a good cumulative impact analysis in California. One of the tasks.

A couple other tasks are to look at indicator species. So, first understand which species we should be looking at, as far as life history information. And then as part of that, see what information is existing or what information may need to be collected to understand. Put that information into the models.

CHAIRPERSON PFANNENSTIEL: Thank you. That was helpful. And I also was looking to get the total amount of money for the entire effort, which I see is $1.5 million. I see that in the writeup; I hadn't seen that. Thank you.

MS. DORIN: Oh, right, that 1.5 million was the money that was already encumbered, right.

CHAIRPERSON PFANNENSTIEL: Right. I

understand. Are there further questions?

COMMISSIONER BOYD: Just a comment or -- I've discussed this project with Melinda in the past, and I just want to kind of put in the record that -- and maybe say for the Executive Director's benefit, that I want to make sure that the actions that this Commission has taken over the past few years with regard to power plants that utilize once-through cooling, or take their water supply from various marine sites, be they estuaries or the ocean, we've incented several in-depth projects as part of our conditions for approving power plants in the site. And who knows, we may do that in the immediate future.

And I just want to make sure that all of this is tied together. Because we've asked a lot of second- and third-party organizations to carry out these studies of impacts and what-have-you. And this is, I would agree, this is much-needed work. And we've all anxiously waited for this.

I just want to make sure that we recognize in our various parts of this organization that we have a lot of cross-over here between past siting cases and undoubtedly future siting cases. And this will be a tool that will

be very helpful.

As one who inherited several power plant siting cases that went on for years because of questions about this, I can see this is a much-needed and welcome tool when it's developed in the future.

So I would gladly move approval.

COMMISSIONER BYRON: And I second.

CHAIRPERSON PFANNENSTIEL: In favor?

(Ayes.)

CHAIRPERSON PFANNENSTIEL: Thank you, it's been approved.

We will now return to item number 2 on the original agenda.

MS. ICHIEN: Chairman Pfannenstiel and Commissioners, on this item I am going to recuse myself because I have worked with staff on this matter. And so in Bill Chamberlain's place, Dick Ratliff will be sitting in and be available for you.

CHAIRPERSON PFANNENSTIEL: Thank you, Ms. Ichien.

Item number 2a. We will take them separately, the a and b. Possible -- 2a is possible decision on the amount and final

application of compensation funds to mitigate for impingement and entrainment losses resulting from the operation of the cooling water systems for units 3 and 4. And this is at Huntington Beach Generating Station Retool project.

Commission Staff recommends the restoration and maintenance of 104 acres of the Huntington Beach wetlands for approximately $7.9 million.

Ms. Stone.

MS. STONE: Good morning, Chairman, Commissioners and members of the public. I'm Donna Stone, the Commission's compliance project manager for the Huntington Beach Generating Station Retool project. And I'm going to briefly go over some general facts that apply both to item 2a and 2b on the agenda today. These two items are inextricably linked.

I will then turn over the technical presentation for item 2a to the Commission's consultants on impingement and entrainment, Dr. Noel Davis of the Chambers Group and Dr. Peter Raimondi of UC Santa Cruz Marine Lab.

After our consultants make their presentation, AES Huntington Beach's consultants

and representatives will speak.

We also have representatives of the Huntington Beach Wetlands Conservancy in the audience today to answer any questions that you may have of them.

Representatives of the Santa Ana Regional Water Quality Control Board and the California Coastal Commission are on the telephone, also.

A brief history of how we've come to where we are today. Units 3 and 4 were retired by Southern California Edison in 1995. And then after restructuring the generating station was sold to AES. In 2001 the Energy Commission granted an emergency certification for the Huntington Beach Retool project, a 450 megawatt, natural gas fired plant. The hope was that the project would come online quickly and help to alleviate the energy crisis California was experiencing at that time.

Due to the expedited permitting process that was used there was not sufficient time to complete the lengthy studies that we normally do prior to certification that determine the impacts and the needed mitigation.

Therefore, the Commission's decision contained six additional conditions required of the project owner which are, in part, Bio-3, which was to prepare a monitoring study plan and conduct one year of monitoring to determine the actual results, impingement and entrainment losses resulting from the operation of the once-through cooling system.

The second was to provide $1,500,000 to fund the project's impingement and entrainment and resource sampling studies. And then the third bio condition was Bio-5. It was to provide mitigation and compensation funds to be used for such things as tidal wetlands restoration, creation of artificial reefs, some other form of habitat compensation that is sufficient to fully address the species impacts identified if the studies determined that the project operations resulted in significant impacts to one or more species of coastal fish.

The amount of mitigation and compensation funds in the final application will be determined by the Commission in consultation with the project owners and state and federal and local resource agencies. And it is this condition

that is the subject of item 2a on the agenda this morning.

The study was funded and is complete. But Commission Staff and AES disagree about three main items. One is whether the impacts are significant; two is the level of impacts; and three is the appropriate mitigation for those impacts.

After attempting to resolve the disagreement, staff has referred this item to the Siting Committee. The Siting Committee, on July 25th, held a public workshop in Huntington Beach at which staff presented its analysis and AES countered with its information and its arguments.

On August 30 of this year staff's final analysis was docketed and mailed to the Huntington Beach mailing list and all interested parties; and was posted on the web August 31st. A minute order recommending approval of the staff's recommendation was published by the Siting Committee on September 8th. And then the staff-proposed order was docketed and filed yesterday, September 13th.

Today we are requesting that the Commission adopt staff's recommendation on the

amount and final application of compensation funds that the project owner is to pay to mitigate for impingement and entrainment losses.

And now I'll turn this presentation over to our consultants, Dr. Noel Davis and Dr. Peter Raimondi.

DR. DAVIS: The study required by Bio-3 was overseen by a technical working group that included the California Energy Commission and its consultants, the California Coastal Commission, the project owner and its consultants, the California Department of Fish and Game, the National Marine Fisheries Service, and the Santa Ana Regional Water Quality Control Board.

This technical working group provided input into the sampling design and methods for the impact analysis, and approved the final study plan. It reviewed all of the progress reports on the study and finally approved the final report which was finalized in April of 2005.

I'm now going to turn it over to Dr. Pete Raimondi who is going to tell you about the technical aspects of the study and the methods that were used to determine impacts.

DR. RAIMONDI: Good morning. Before I

start I wanted to just reinforce what Noel had said, which was that all this work was overseen by the technical working group, which was a group of people that had been put together including independent scientists. And for the rest of this discussion, the part that I'm going to give, I wanted to just make everyone aware that we have no contention at all with the technical aspects of this report. The work that has been done by Tenera and MBC is state of the art for California. It's really wonderful work. And so we have no qualms at all about the technical aspects of the work.

It's mainly in terms of interpretation. And these are reasonable scientific disagreements. And that's why we're coming to you with these.

I want to go over just very briefly the typical impingement, entrainment and thermal effects for a generalized power plant, just so that our terminology is similar.

Fish and other organisms, they could be invertebrates, they could be plankton, they could be marine mammals, for that matter, are entrained in cool water that is used to cool the power plant. And this is true for all intakes that use

once-through cooling.

Those fish and other organisms come in and then there's almost always a traveling screen mechanism that precludes the entry into the power plant, itself, by big things, typically things bigger than about three-eights of an inch.

Those things that are impinged, those are now called impinged organisms. They are then deposited oftentimes into trash. And then they're taken offsite and disposed of. There are some power plants that have return systems, but not this one.

The smaller things go through the pipe and into the power plant. And there the assumption, and it's a general assumption that is accepted by all parties, is that anything that actually is entrained into the power plant is killed. And so then those dead things are then deposited out in the outfall, which in Huntington Beach's case is also in the open coast system, and in the thermal discharge.

This is a schematic of the Huntington Beach discharge in particular. There's an intake pipe that's about 1500 feet offshore in 27 feet of water. And then there's a discharge pipe that's

about 1200 feet offshore in about 22 feet of water. So this is the general schematic for Huntington Beach.

How do you go about estimating the losses. What we're really talking about, and all I'm going to be talking about today is entrainment losses. That's entrainment of the larval organisms that come into the plant. How do you go about doing that?

This is a fairly straightforward process. It's time consuming, it's labor intensive and it's expensive. But it's a fairly straightforward process.

First of all, you can calculate the amount of water that's coming into the plant. That can either be done through measurements or a volumetric approximation based upon the pumps. But that's a fairly straightforward approximation.

Then you can measure the concentration of larvae that are coming in; and that's done through sampling, net sampling typically. You just pull nets; you count the number of things in there; you take them to the species group. And then you use that information, the number times the volume, and you get the total number of

individuals of whatever species were entrained, that have been entrained during that particular year.

During the course of the Huntington Beach study there were 57 fish species, and many other invertebrate species that were collected during the entrainment sampling. I put that number up there, 57, because the analyses that were done, we done on a subset of those species. And that becomes a critical point.

So, how do you go about then assessing the impact? I said it's really easy to estimate entrainment, but assessing the impact is a much more difficult process and it's in the realm of models.

There are three models that the technical working group agreed to utilize in estimating the impacts or the effects of entrainment. These are commonly used models. And they're used across the whole country.

There are two that are what are called demographic models because they turn larval losses into adults. That's the currency, adults. One is called fecundity hindcast, the other is called adult equivalent loss. They're derivatives of the

same overall model.

The third one, which is a more recent inclusion in the California cases, is what's called proportional mortality. And it's based upon the empirical transport model, something that just came up in a prior item.

To understand these, I'm just going to use this schematic. Here are the larvae that are going into the plant through entrainment. And these larvae, if they had not gone into the plant, would have suffered normal mortality out in the open water, and they would have eventually turned into a certain number of adult fish. If you just calculate the number of adult fish that these larvae would have turned into, in the absence of the power plant, you'd get an estimate of the loss of adult stock. And that's adult equivalent loss, because those are the adults that were lost due to the entrainment of larvae.

To get that sort of information you need one piece of information; and it's a piece of information that we oftentimes don't have. And that is the survivorship between the larval phase. Those are the little babies that have just been born, and the adult fish some years later. That

information is absent for most California species.

The other way to go about it is to take these larvae before they've gone into the power plant and say, how many adult females would have been required to produce those larvae. You need two pieces of information for that. You need to know the number of babies adult females typically produce; and then the loss rate, or the survivorship between adult female extruding these babies in a time when they are taken into the power plant. Again, we don't have that information for many species in California.

So, if you look, this is a table from the report, and this is just the fecundity hindcast column and this is the adult equivalent loss column. The only point of this column is to indicate how many not-applicables there are. And the reason that there are not applicable is because we didn't have the demographic or the life history information to estimate fecundity hindcast or adult equivalent losses for those species.

So there's only two species, the goby complex and the northern anchovy that we can calculate both. And one additional one for blennies.

And so the only point of these last series of slides is to say we don't have any fundamental disagreement with the adult equivalent loss estimation or fecundity hindcast estimation. We just don't have the data to utilize it in any sort of comprehensive way.

And so when we're looking at what the impacts are of entrainment, the first two models, fecundity hindcast, we don't have enough information for adult equivalent loss. We also don't have enough information, not that we don't want to use them, we just can't.

And we can't because those sorts of data have not been collected yet for the species that are entrained there.

And so we're left, really, with one and only one option, and that's proportional mortality. Now I want to describe that to you just briefly.

So, to understand proportional mortality you need to understand two concepts, not one; not just piece of M, which is the proportional mortality coefficient, but also this term that's called the source water population.

The source water population is a spatial

area, it's a region out in the ocean that contains the larvae that could be at risk of entrainment. So, it's that spatial area.

And what is that spatial area? It's that spatial area where larvae could transit during their early life and end up in the intake pipe. And that's based upon how long they're in the plankton.

So, what's proportional mortality, then? Proportional mortality then is the percentage of larvae at risk in that source water population that are killed as a result of entrainment. So some fraction of the ones at risk will be lost due to entrainment. That's proportional mortality.

And so in this case it's a 1 percent. And 1 percent might seem really small, but you have to take that 1 percent in the context of the source water population, as I'll describe in just a second.

How was this done at Huntington Beach? At Huntington Beach they established a spatial grid to sample larvae that could be at risk of entrainment. This is about a 10 by 4.5 kilometer grid. There were stations that were set up in a T formation. This is a very typical, this was

agreed upon by the technical working group; this is state of the art stuff, again, no qualms about this whatsoever.

Based upon the sampling in this you can then establish what the source water population is for a particular species. And here's another key point. The proportional mortality estimates and the source water populations will be different for each species. It's not a uniform number.

So, as an example, for queenfish, a croaker, the source water body is this area depicted in red here, which is about 51 miles. So it's 51 miles along the coastline out to just about 4.5.

What that means is that individuals in the source water population were at risk to entrainment. For white croaker and other croaker it was about 29 miles, and so it's smaller. Why the difference? Their life histories, their larval periods are different, their larval periods of vulnerability. And you can see that for a spotfin it's 10, and for blennies it's 7, and so there's a variety of source water populations.

So, what do we do then. Remember, we had 57 species. We can't use them all because

there just weren't data on -- sufficient data on all them, so we had to take this particular approach, which was to determine target species. Target species are mainly determined by their prevalence. If there's lots of them they're probably a good estimator of the impact. If there's few of them, probably not so good.

Determine the period when larvae are at risk. That establishes the source water population. Calculate the proportional mortality for those target species.

Then this is a big jump, but it's an important one. We're going to assume that the target species, those ten or so species that we're actually able to assess, are representative of species that are not targets. Those are other fish species and also invertebrates. So we get a comprehensive view, if we make that assumption, of the losses across the community of things that could be lost.

And then these values represent the estimated rates of mortality for all species that have larvae who proportional mortalities were not directly determined.

Here are the species that were used, and

I'm leaving one out, the goby complex, which actually had huge numbers of losses due to entrainment, and the AES Tenera are going to talk about them separately.

So, we concentrated on those species that are considered the open coast species; and these are all open coast species. And this column here, this is the actual estimated annual entrainment. And it goes from 69 million down to about 6 million larvae.

This is the proportional mortality expressed in terms of percentages based upon our best single estimate. And so if you just go through here and you take the average, the best estimate of the proportional mortality across all species is about half a percent, which seems tiny, tiny. In my opinion, that's misleading, the assumption that that's tiny.

If you also incorporate a level of uncertainty, because while this estimates the best single estimate, there's uncertainty in these. And so if we view something like a confidence interval, how confident we are of this, the range of possible effects are somewhere between half a percent and 30 percent. And so the range is

broad. And while this is the best single estimate, it could be as high as 30 percent based upon the estimate of error that we have in these models.

So, with the fecundity hindcast and EO, we can't estimate adult loss. We can, but we can't in this particular case, because we don't have the data. With proportional mortality we can.

And now here's the real question, and this is where we enter into the realm of disagreement between the two sides. What loss is environmentally important. What counts as important. Is it local, regional or national. And so I'm going to present our view of this.

We think, and we favor the use of this concept that is called area of production foregone, sometimes also called habitat production foregone; same model. It's a way to interpret the loss. This method allows for conversion of organism loss to habitat. And it can work for any source of loss. Impingement, which we're not talking about here, or entrainment. It can also work for any estimate of loss, which is fecundity hindcast or adult equivalent.

But importantly here it works really well for proportional mortality. So we're going to come back here; I'm going to use this example again, and tell you that you can't, in my opinion, interpret proportional mortality without knowing the source water population.

There are two scenarios that I'm going to play out here to give you our attitude about this.

In scenario one, the proportional mortality is 10 percent; in the other one it's about half a percent, .56 percent, which is the number that we're using.

What that means is that 10 percent of the larvae at risk, or in scenario two, about half a percent of the larvae at risk are actually lost, killed due to entrainment. And just based upon this, 10 percent is way worse, and it is, 10 percent is worse than half a percent. There's no question about that.

Until you include the source water population. And now let me tell you that in these two examples the source water population's one acre, that means 10 percent of the larvae in that one-acre area are lost. And here it's 640 acres

or a square mile, which means half a percent of all the larvae in 640 square acres are lost.

And if you multiply them together you get, it's a simple expression, but you get the area of production foregone. It's just a product of those two.

And so in these two cases the area of production foregone is .1 acre in scenario one; and 3.6 acres in scenario two. And we view this as the currency, as the correct currency. What this means is that you would have to restore 3.6 acres or add 3.6 acres of new habitat to compensate for the larval losses. In this case you'd have to add .1 acres.

And that's why we use both these terms, proportional mortality and source water population, as a product and a new term, which is APF, to give us a currency to evaluate impacts.

Okay, so for proportional mortality of queenfish the mortality of queenfish was .6 percent. So we can calculate the source water population, which I've already shown you; that's this region here. Then the habitat required to compensate for queenfish losses alone would be 89,928 acres, that this, that's the source water

population. Times .006, which is the loss rate, which comes out to be 539 acres.

What this says is if you wanted to completely compensate for the losses of queenfish larvae you'd have to add 539 acres of new habitat to the system. And that's based upon the best single estimate of loss of queenfish.

If you go with the confidence interval it would be up to about 26,000 acres. And so the range is somewhere between 500 and 26,000; the best single estimate is 500, but it could be much more than that.

If you go to the tables then, and we estimate the average APF, it comes out to be 208 acres across all species. But for units 3 and 4 we're going to cut it in half, and that comes up with 104 acres. That's where the 104 acres comes from. It's based upon the average APF for the whole Huntington Beach system, divided into, because we're only talking about units 3 and 4. That's our best single estimate; the impact could be as large as 4800 acres if you go with the confidence interval.

And that's a description of the approach that we took. And what does this mean? What it

means is if 104 up to 4800 acres of new Bay habitat were added to the system in the general area of the source water body, then for units 3 and 4, the direct impacts to fish and invertebrates would be mitigated for. They'd be compensated.

Direct impacts to other entrained species would probably be mitigated for. The ones that we didn't target, the ones that we didn't sample, which is important. Because we want to compensate for everything.

And indirect effects, things that feed on those would probably also be mitigated for, assuming that you could produce this new habitat and it was comparable to what was in the area already.

And so I'm going to turn it back over to Noel now.

DR. DAVIS: The technical working group used the information from the impingement and entrainment study on the magnitude and nature of impacts in order to determine the significance of impacts and the amount of mitigation that would be required to compensate for those impacts.

Because this process is a CEQA-

equivalent process, in order to determine significance we had to use mandatory thresholds of significance under CEQA. And on the slide here are the thresholds of significance right from the CEQA guidelines that apply to biological resources. And the ones that are highlighted are the ones that we based our determination of significance on.

As Dr. Raimondi told you, the analysis was done on a small number of targeted species. But those are just representative of many more species that are entrained by the cooling water system.

Every day as much as, a permitted amount of 253.5 million gallons per day may go into the cooling water system to cool units 3 and 4. And that water is not just water, it's habitat. And it includes many many small organisms, a great diversity of small organisms. And these small organisms include the eggs, larvae and spores of marine fishes, invertebrates and plants.

And these small organisms are also the base of the food well. They're eaten by adult fish, which then are eaten by a higher order predators including seabirds, larger fishes,

marine mammals and human beings.

When all the organisms in the water that goes through the power plant are lost, essentially amounts to a loss of function of that seawater habitat. It's losing its function as reproduction because the output of reproduction, the eggs, larvae and spores are killed. And it also represents a loss of foraging value because all of these organisms that form the base of the food well also are killed.

So, by the mandatory threshold of significance, this constitutes a reduction in the functional value of native fish, wildlife and plant habitat. And therefore is found to be significant under CEQA.

In addition, the killing of what amounts to billions of small organisms a year is clearly a substantial degradation of the environment; again, a mandatory finding of significance under CEQA.

In addition, this ocean water in the vicinity of the power plant is foraging habitat for several listed species. The endangered California least tern has a breeding colony on the beach just down the coast from the power plant. And it feeds on fish species that are impinged and

entrained by the cooling water system.

The federal threatened western snowy plover is abundant on the beaches near the power plant. And it feeds on invertebrates, including sand crabs, whose larvae are entrained in the power plant.

And the endangered California brown pelican also is common in the waters around the power plant. And it, too, feeds on fish species that are impinged and entrained.

Therefore, while there's no direct impacts to listed species, there's indirect impacts because their foraging habitat is degraded. Again, a mandatory finding of significance under CEQA.

Finally, I think we've all been concerned and aware lately that our ocean waters off California have become a serious cause of concern. We see fisheries dropping and being closed. And many measures being taken to try to improve the state of our waters.

The impingement and entrainment of marine animals by the cooling water system of the power plant are contributing to the significant cumulative impacts on marine life. So that, too,

is a finding of significance under CEQA.

As Dr. Raimondi told you, in order to compensate for those losses -- oh, I've got this slide -- this finding of significance by staff was agreed with by the agencies that were part of the technical working group. And these include the National Marine Fisheries Service, the California Department of Fish and Game, the Santa Ana Regional Water Quality Control Board, and the California Coastal Commission. All of these agencies wrote letters saying that they find the impacts to be significant.

So, as Dr. Raimondi told you, in order to compensate for these impacts, we would need to create 104 acres of new nearshore ocean habitat. There's no real way to create, or even restore, nearshore, soft-bottom habitat. So therefore, we must look at in-kind -- out-of-kind mitigation.

And the out-of-kind mitigation that's most appropriate for impacts to soft-bottom habitat is wetlands restoration. There's a history of using wetlands restoration for impacts to nearshore, soft-bottom habitat because some species benefit, such as gobies and California halibut, benefit directly from tidal wetlands.

And tidal wetlands provide benefits that, while they don't directly benefit some of the species that are impacted, they provide indirect benefits. They cleanse runoff before it enters the ocean; and they're highly productive and export nutrients to the nearshore marine environment.

Staff has identified a tidal wetlands opportunity in the immediate vicinity of the Huntington Beach Generating Station. And that's what's shown on this slide. And those are the Huntington Beach wetlands. And there's a restoration plan already in place for those wetlands, which means in terms of implementing a restoration, they're already pretty far along, and there's an entity, the Huntington Beach Wetlands Conservancy, which has representatives here today, that is in charge of the restoration.

Therefore, staff has recommended restoration of those wetlands as mitigation for the impacts of units 3 and 4. And we recommend that the mitigation be done at a ratio of one-to-one. Normally out-of-kind mitigation requires mitigation ratio of greater than one-to-one. But because tidal wetlands are so productive, probably more productive than nearshore, soft-bottom

habitat, and because they offer a number of benefits that nearshore, soft-bottom habitat doesn't have, we feel that a one-to-one mitigation ratio is appropriate.

So, therefore our recommendation is to contribute money sufficient to restore 104 acres of the Huntington Beach wetlands, and maintain them for ten years. And at the time we wrote our final analysis, that amount was $7,956,000.

And the agencies on the technical working team have agreed with staff's mitigation recommendation.

CHAIRPERSON PFANNENSTIEL: Thank you. Thank you, Ms. Stone, for an enlightening presentation on this. I know most of it was in the written material for this to highlight.

Now, should we ask applicant for comment on the staff proposal.

MR. PENDERGRAFT: Good morning, Commissioners. My name's Eric Pendergraft and I'm the General Manager of the AES Huntington Beach facility. I'm going to go over a little bit of background, and then turn it over to a couple of our experts to talk about some of the science. And then I'll follow up to conclude.

First of all, we applied for this retool back in 2001 in response to the energy crisis. You know, the Governor, Governor Davis at that time, issued an executive order that allowed for this expedited power plant licensing process. And, in fact, encouraged, you know, businesses to come forward and provide generation to help ease the crisis.

Now, units 3 and 4, as Ms. Stone alluded to, were existing structures that had been retired by Southern California Edison. Retooling those units was really the quickest way to bring new generation into supply for California. And I think we were one of the only facilities in the state that were able to have this ability.

With a lot of hard work by everybody involved, both the staff and ourselves and all those involved in this process, we were able to complete the certification in the extremely compressed timeframe; and the certificate was ultimately granted and the units were operational in January and August of 2003.

Now, you know, clearly with respect to Bio-4 and Bio-5 and all the conditions, you know, the intent of the conditions as written were to

focus on coastal fish. And it was our understanding, we believed that most of the stakeholder, if not all of them, understood that that was the intent.

Now, Bio-4 required us to fund a study, which we have done. And as Dr. Raimondi and Dr. Davis have alluded to, we did agree with how the study was put together. That is basically where our agreement stops.

That study was put together under the assumption -- with our agreement, under the assumption it was constructed in a way that would support the conditions as written. And principally that it would be focused on determining significant impacts to coastal fish.

So, our agreement basically stops at how the design -- or how the study was designed.

It's also extremely important that everyone recognizes the unique nature of this project. I think it is unlike any project that has probably ever been in front of the Commission before. This is an existing structure; it is approximately 40 years old; and it was designed as a retool to take into account the fact that it was existing and could get back into operation as

quickly as possible.

The certification is only valid through 2011. Our license period is only valid through 2011. And we are here talking about mitigation at a point when half of that period has already expired. And we have three and a half years worth of actual operating data for us to rely on and refer to.

Now, let's talk a little bit about the term of the certification. If you go back and review the record from the 2001 proceedings there are a couple fundamental reasons for why it was limited.

One, there was concerns by many of the stakeholders regarding the expedited process. And I will note that we objected to a limited license period from the very start. It was originally proposed to be five years; it was eventually extended to ten. But we objected to that limitation from the very beginning.

Further, there were some stakeholders that felt, and I'm sure still feel, that the units should be replaced when the existing license expires. And if you review comments from the record provided by CEC Staff during that period,

it supports the view of these stakeholders.

And I'll read this: The applicant is, of course, free to make a future application to extend operation of the facility beyond the five-year period. Such a request would be the subject of a new review and analysis. It is the community's clear preference, which the staff shares, that a modern, more efficient, less visually prominent plant replace this aging facility once California's energy emergency is abated."

Additionally, since we were originally granted the license there have been significant regulatory developments with respect to impingement and entrainment. The EPA finally issued their rule 316(b). Now the State Water Board, which is actually responsible for implementing it, has issued a draft scoping document that, as written, would require us to implement technology and/or operational measures, and explicitly limits the use of restoration.

Now, it's important to note that if we, any additional technology we install or operational measures that we take which substantially reduce our impacts and the need for

mitigation through restoration.

Throughout this process we have consistently met our obligations. The Surfstone study was a huge contentious issue when this proceeding was originally taking place in 2001. We conducted that study. It confirmed that we were not the source of the bacteria problems along the Huntington Beach coastline.

We completed the Bio-4 study. Ms. Stone, the Compliance Manager, has indicated to us, at least, that we've met all the conditions of certification with Bio-5 still pending.

And another very contentious issue at the time was where all this energy was going to go. And I will confirm to you that every megawatt of energy from these facilities went to serve California. The output is contracted fully and completely to Southern California Edison. And they are distributing it throughout California.

Now, I'm going to turn it over to John Steinbeck, who's a principal scientist from Tenera Environmental, and a Vice President there. He's going to talk a little bit about the APF application.

MR. STEINBECK: Good morning,

Commissioners; my name's John Steinbeck with Tenera Environmental. And as Dr. Raimondi stated, before, you know, I was a member of the research team that designed the study, and actually Dr. Raimondi and I have collaborated on many studies that have been conducted on the California coast. And I was a principal author of a CEC report on assessment methods for looking at cooling water intakes that Dr. Raimondi was one of the co-authors on.

So, as he stated, there's a lot of agreement here. And in that report there's a mention of area production foregone as a method for assessing impacts. So, as I say, there's a lot of agreement here.

So, today I'll talk about the CEC application of APF, and an alternative method that was actually -- we talked about in the research team as another approach. And this was for the gobies that you heard about, the wetland.

And this APF was -- we were asked to do this analysis, and we completed that as part of the research team. Unfortunately, it was never used in the staff's application of APF for scaling the restoration.

In terms of my presentation I don't really have to talk about APF too much, because Dr. Raimondi covered that. But, I will talk about how it was applied in the CEC Staff proposal and our disagreements with that and this alternative approach.

So, I'm not going to talk about this. Other than I don't know if Pete mentioned this, but one of the real confusing things about the area production foregone is when you do this translation into habitat a lot of people all of a sudden when you're talking about larval fish versus, and you were talking about larval fish and all of a sudden you're talking about habitat, that there's some implication that habitat's been degraded or lost through the process of entrainment. And that definitely is not the implication in this; it's just a way to translate the results of the larval losses into what production would need to be used to replace that.

So, I'm going to skip this. This is just my little graphic of the empirical transport model that Pete talked about, and source water. And then the APF.

I do want to talk about, just point out

one thing here, and if you'd look at this graph, we sample a small area of this much larger source water population of entrainable larvae. But if you look at all those little dots up there that are in the, our source water, those are all larvae. And the source water is based on where the larvae are in this application. And I'll come back to that.

So there's no adults in this graph; it's all larvae. So, under the correct application of APF, this is a very appropriate and great method of scaling results, when you can determine the adult habitat that are producing the larvae. A good example that was brought up was gobies. The adult gobies occupy mudflats. So, in a wet -- if a power plant was located in a wetland and 10 percent of that, the entrainable larvae were lost, goby larvae were lost, then theoretically if you replace 10 percent of that mudflat habitat where the adult gobies are, that would replace the larvae loss due to entrainment.

And this was actually the approach taken at Moss Landing for coming up with the restoration package there.

Another application good example would

be rockfish. The adults occupy reefs where they produce larvae and you could determine the amount of rocky reef in a source water area. And it's probably not going to be the entire source water area that we showed up there, because there's not rocky reef everywhere. It's interspersed among sand. But you could figure out how much rocky reef is there. Dr. Raimondi's done this for Diablo Canyon and come up with an APF estimate that's again how much adult habitat would need to be replaced to compensate for the losses.

But, in my mind, APF is not really applicable to all habitats and species; and specifically probably the most difficult application is this approach that's being taken at Huntington Beach where it's a three-dimensional environment source water that's being estimated. It's not an area, I think Dr. Raimondi used the term bay habitat, well, it's not bay habitat. It's just open coastal mostly sandy habitat out there.

And the fish that most of those estimates are based on, the croakers, are moving around in that three-dimensional water habitat. The number of adults is changing on multiple

temporal and spatial scales. I'm sure this isn't the case, but there may not even be adults present in that source water that's being estimated. What you're estimating could be all based on strictly larval transport.

So, I know that's not the case; I know there's some adult fish there. But that number of adult fish is constantly changing.

So, again, in this case the area of production foregone is being based on water; and that is really the only habitat here that's, you know, the requirement for the adults to produce larvae, is the water.

And so you kind of get the idea that there's a high level of uncertainty associated with taking this approach to calculating APF.

Now in the staff recommendation they state that the APF calculations for Huntington Beach were not difficult estimation. And, in fact, that's true. If you take just this area of water and multiply it times proportioned mortality you can come up with a number. But the apparent simplicity in this doesn't make the calculations correct. And it ignores several assumptions or ideas that are critical to this concept that I

think are important to remember.

So, this application of APF produces an estimate of soft-bottom habitat. And this habitat that's being estimated and the mitigation that's being based on it has no connection to the production of the larvae being entrained.

A contrasting example to this is Moss Landing Power Plant where the restoration was based on wetland mudflat habitat for adult gobies that produces the larvae that were being entrained. So, in this case you have an indirect or out-of-kind estimate versus something like Moss Landing where you have an inkind more direct estimate.

So, the other problem with the CEC estimate, APF, is that it assumes that this entire source water area being estimated is habitat, adult habitat for whatever adults are that are producing the larvae. And as I previously stated, probably don't know how many adults are out there because it's changing all the time. And they're using this three-dimensional, you know, water column for where the larvae and eggs are just released.

The other thing that's about this type

of approach is it's always going to result in the largest possible estimate of APF, because you're using the entire source water based on the larvae, not the adults.

So, in this case APF, you don't have an area, and the production foregone, you don't have any production in that area that's being foregone, so I don't -- one of the problems with this is I don't see how it's applicable. Or if it is, a lot of -- some considerations have to be taken into account for the uncertainty associated with the estimate.

All this is kind of unnecessary because as I stated before, we came up with an alternative estimate of APF that the research team and the CEC Staff requested that we go through and come up with. And the type of more detailed analysis that I'll go through that we did on this is a real stark contrast to the approach taken by the CEC where you just multiply these numbers together.

So, as Pete stated, for this alternative calculation, or like you say, more accurate calculation, you start with the estimates proportional mortality and we had to add in some numbers for the gobies that might have been in the

wetland areas around Huntington Beach, and you come up with, based on the cooling water volume of 203 mgd, about half of a percent of the goby larvae were being entrained by the plant annually.

Now, so you have your estimate of proportional mortality. Now, the other part of this, and this is the missing step, is what is the adult habitat. So, what we did, we went into the national wetlands inventory and pulled out data on mudflat habitat and the coastal wetlands near Huntington Beach. And this is the habitat that's critical to adult gobies. And increasing this habitat does result in increased larval production.

So, we came up with these numbers in this table, you know, to look at the numbers aren't that important, but basically we added up all the data from the habitat to come up with total number of acres of goby habitat, adult goby habitat in those wetlands, and then multiplied that by that proportional mortality.

So now you're taking a proportional mortality and multiplying it times that adult habitat. This is the exact same approach used in Moss Landing for the Elk Horn Slough restoration

which has been very successful and it's a real good model for restoration projects.

So, this came up with an estimate of, let's see -- do I have it on -- an estimate of 16 acres. And we believe this is a more appropriate application of APF, and provides direct benefits to many of the -- well, directly to gobies, which made up about 40 percent of the total entrainment. It also provides direct benefits to a number of other species that are dependent on those wetland areas for production, or as adult habitat.

So, in total, --

COMMISSIONER BYRON: Mr. Steinbeck, may I interrupt you for a moment?

MR. STEINBECK: Sure.

COMMISSIONER BYRON: Just to clarify something you said. You said this results in 16 acres, is that correct?

MR. STEINBECK: Yes.

COMMISSIONER BYRON: You're not referring to the slide 21, are you, that says 1603 acres?

MR. STEINBECK: Oh, okay. It actually ends up with eight acres. So, --

COMMISSIONER BYRON: If I could just --

are you referring to this slide 21?

MR. STEINBECK: Let me go back.

COMMISSIONER BYRON: That has 1603 acres.

MR. STEINBECK: Right.

COMMISSIONER BYRON: Okay.

MR. STEINBECK: And so the original estimate that we were using was based on the total cooling water flow of 503 or 507 mgd. And so that, if you -- that was about 1 percent of the -- resulted in mortality of about 1 percent. So 1 percent times that 1600 was the 16 acres.

But, as the total flow for the new project was 203, so we adjusted that down by half. So it's eight acres, or approximately eight acres. Does that make sense?

COMMISSIONER BYRON: Yes, thank you.

MR. STEINBECK: Yeah, sorry about that. What happens with this is a lot of numbers start flying around, and then, you know, you can understand.

Anyway, we believe this method provides a direct estimate of, you know, rather than using out-of-kind mitigation or out-of-kind application of APF, this is an inkind direct application

that's providing direct benefits to a large number of the species being entrained. It seems really strange that when you have this direct method of estimating an inkind mitigation with pretty good level of certainty, with a lot of scientific support, why would you choose an estimate based on nearshore habitat that, you know, is very weakly linked to adult production.

The other thing I'd point out is that when we went through and did some calculations, the APF estimates for gobies were really closely supported by the demographic model results. This is another way to kind of determine the -- kind of add to the certainty with your estimates, you know. Are you models giving you comparable results.

In this case we were getting fairly comparable results between demographic models and the APF estimates for gobies.

And, let's see, you know, in contrast you have the CEC approach which has a high degree of uncertainty associated with that estimate.

So, --

CHAIRPERSON PFANNENSTIEL: Mr. Steinbeck, I want to make sure I understand what

you're saying. That your alternative calculation was done for the goby population.

MR. STEINBECK: Yes, which was --

CHAIRPERSON PFANNENSTIEL: And your assumption, though, is that you can transfer that analysis to the other fish populations in the area. And so your conclusion of eight acres would apply to the other -- to the entire area in other words?

MR. STEINBECK: Well, that eight acres, that's the number from the APF calculations. That's applying direct mitigation for the losses to the gobies, which are 40 percent of the total estimated entrainment for the power plant. Plus direct benefits for a large number of the other species. I did some just rough calculations.

About 50 percent of the total estimated entrainment would result in direct benefits from that wetland mitigation. Other species, the other roughly 50 percent, croakers and stuff, would get indirect benefits from that. And the other thing is that as we've heard from Noel and others, there's -- the wetlands provide many other benefits that, you know, go beyond just compensating for the fish losses.

But I think the big problem is you have something with a high degree of certainty that can be supported scientifically with some, you know, a lot of data behind it, versus something that really has a very loose connection. And I think, you know, you've heard it mentioned as out-of-kind mitigation. Why would you choose out-of-kind mitigation when you have an inkind mitigation that's supporting about the same percentage of the fishes that are being entrained.

I think finally, to put this into context, the CEC Staff-proposed restoration of 104 acres based on a cooling water flow of 203 mgd, the wetland mitigation for SONGS, and there was a lot of different parts to the total mitigation package for SONGS, but the wetland mitigation was for mitigating entrainment losses, and was 150 acres. And that was for a total cooling water flow of 2.5 billion gallons per day.

So it seems that the number for the Huntington Beach is really out of, you know, doesn't really have any connection, is really out of scale here to comparable mitigations.

It's also kind of interesting that just based on this calculated value for gobies, or the

calculated value for gobies and for the -- cost is about 10 percent of the SONGS mitigation, which is about right based on total cooling water flow.

So, now I'll turn it over to -- or, are there any questions?

CHAIRPERSON PFANNENSTIEL: No other questions.

MR. STEINBECK: I'll turn it over to Shane Beck of MBC, who is also one of the scientists involved in the project. Thank you.

MR. BECK: Good afternoon.

CHAIRPERSON PFANNENSTIEL: It's still morning.

COMMISSIONER BYRON: Good morning.

MR. BECK: I've been up since 3:00. My name is Shane Beck; I'm a Senior Scientist with MBC Applied Environmental Sciences. And I was Project Manager at MBC over the course of the impingement and entrainment study, through study plan development and the actual conduct of the study.

And both MBC and Tenera, along with AES, were members of the working group. We developed the study plan and modified it with input from the working group participants.

And I'm just going to go through briefly some of the major sticking points that we have right now. The study was designed to assess significance as required by the conditions of certification. But the significance criteria used by staff were never discussed with AES, MBC or Tenera. And as John pointed out, we feel the use of APF to scale restoration is -- we think there's a better way. It can be done, but the method proposed by staff wasn't made apparent to us until March of this year, almost a year after we submitted the final report.

Condition Bio-5 and the actual impingement and entrainment study focused on fish and a subset of invertebrates that we refer to as target invertebrates. But the staff recommendation indicates that there's indirect impacts to special status bird species and a habitat that were never part of our study, or asked to be part of our study.

John's already summarized the APF points so I'll skip over those. But total entrainment at Huntington Beach is dependent on not only the densities of larvae that are entrained, which no one is disputing, but also the amount of water

that flows through the plant, which is dependent on how often the circ pumps run, as well as the duration of impact. And in a few minutes Eric is going to go over some proposed options that take both the actual cooling water flow and the limited license period of the plant, which is ten years, into account without actually limiting the operation of the facility.

Pete already summarized the entrainment results. Just to touch on those, there were no threatened or endangered fish or invertebrate species collected. And that the estimates of annual mortality due to entrainment at units 3 and 4 at maximum flow averaged less than half a percent for gobies. And then all the other species collectively, there was about nine, averaged less than a third of 1 percent.

And this is just the relevant condition of certification that specifies that if significant impacts to coastal fish species are identified, those must be mitigated.

The staff recommendation is based, in part, on this hypothetical indirect impact to special status bird species. We could have examined potential effects to bird species as part

of this study. It's one of the things my company does. But it was never mentioned during the course of the study plan development, or during the actual course of the study.

Staff is also equating the use of once-through cooling to substantial degradation of habitat. And, again, we focused the study on the collection of fish and invertebrates. This is something else we could have studied over the course of the analysis period by looking at affected and nonaffected areas, but this wasn't brought up until recently.

And just to summarize we think these interpretations are inconsistent with condition Bio-5, and also the study performed.

This is just a graph to illustrate the natural variation that occurs in larval densities off California. This is a time-series graph from the CalCOFI program. Studies larval densities every year from 1951 to 1998, I believe.

And you can see that over the course of a year or two years the densities of fishes can vary by as much as 50 percent, 100 percent, even higher than that. And so when we're talking about losses as small as a third of a percent, or half a

percent, there's probably no way we could even measure a change such as this, if for some reason the facility stopped operating, or there was a switch to a different type of cooling water system.

And just for perspective, entrainment results are often reported in the millions or hundreds of millions. And I just wanted to point out that most of the species that we deal with, not all, but most have high fecundity reproductive rates. And also high mortality rates. And the queenfish, which is one of the most abundant species in both impingement and in entrainment can produce almost two billion eggs per year. Just to clarify, we got 18 million queenfish larvae in the entrainment samples.

And I'm not implying that that is equivalent to nine adult queenfish; there's mortality through each life stage and I don't want to incense Pete.

And so just to quickly summarize before Eric goes on to present some alternatives, that we think the application of the science is wrong; but we think that we do have the data in hand that can support a really solid restoration project.

Thank you.

MR. PENDERGRAFT: I will acknowledge that some of this science has been even difficult for me to comprehend. But I think if you take anything away from this it's that, you know, these are all well respected biologists and scientists. They have a lot of expertise in this field, and there is substantial amount of disagreement in the interpretations of the study results and what is being concluded here.

I'm going to talk about just some of our concerns and then I'm going to present a couple alternatives of what we think are more supportable by, or supported by the data and the actual conditions of certification and our license period.

You know, we have expressed this concern, and I will express it again, in our disappointment with the position that the staff has taken in this certification, and particularly with respect to Bio-5.

As we've alluded to, we've been members of the working group and we did participate in developing the study plan and agreed to that. But aside from that, really the process limited any

real meaningful input from us. And we think that there are numerous specific characteristics and issues of this certification that were ignored.

The limited duration of the permit is a real significant and important issue that was not taken into consideration.

As Shane alluded to, our impacts are directly proportional to the amount of circulating water flow we draw into the facility. The numbers presented by staff are based on our maximum permitted operations, assuming we run 100 percent of the time. They ignore the actual operating profile of our generating units.

As Shane and John alluded to, there's significant technical flaws with their scientific conclusions. The intent and wording of Bio-5 has been stretched and distorted in order to support their significance findings. And lastly, the pending 316(b) regulation, which is clearly going to have some impact on what happens to the facility and our impingement and entrainment going forward.

And really, you know, the process appears to have been conducted, to us, to generate just unfounded and insupportable and

disproportionate amount of mitigation when you look at what's been done with similar facilities that have completely different licenses than we have.

And absent a real significant modification to the position being recommended by the staff, we are really left with no other options but to pursue all the available remedies we have.

Having said that, we are committed to providing appropriate mitigation. We want to fully address our impingement and entrainment losses. And I'm about to go through a couple of proposals that are based on doing that, but they're based on providing full mitigation for our actual impacts over the life of our certification.

And I'm going to present two alternatives, but both of them are going to be sort of based on the same underlying fundamental points. And I'll go over them right now with a little more detail on the following slides.

Point one --

COMMISSIONER BYRON: Mr. Pendergraft.

MR. PENDERGRAFT: Yes.

COMMISSIONER BYRON: May I interrupt you

for a moment?

MR. PENDERGRAFT: Sure.

COMMISSIONER BYRON: Is this information you presented as well, when we met back in July 25th down at Huntington Beach, or is this new?

MR. PENDERGRAFT: Elements of this we presented, but there are elements of it that are new, that are more specific to the alternatives, and there are two alternatives presented instead of one that was presented in general without real specifics.

COMMISSIONER BYRON: Okay, thank you.

MR. PENDERGRAFT: So both of them are based on the following four points. One, we use actual calculated impacts over the first five years, which are now essentially past.

We applied conservative estimate of our future operations to determine impacts over the second five years. We clearly considered the ten-year term of this license.

And this is a new point here that we didn't really cover. If, for some reason, we end up under-estimating our operations we will commit to provide additional mitigation at the end of the license period at twice the regular ratio, so at a

two-to-one ratio.

Now, I'm going to go into this in a little more detail. Point one, it is extremely difficult for me to understand personally why we were determining impacts over the first five years of operation based on maximum permitted operation when we know, we know with absolute certainty, that we operated at actually approximately 25 percent of that. It is a hypothetical scenario that did not happen. And if the objective here is to really compensate for our actual impacts, I cannot see why we would be using operations that did not occur.

COMMISSIONER BYRON: I believe I asked you this question on the 25th of July, as well. Are you indicating that you're willing to accept a lower operating limit for the power plant?

MR. PENDERGRAFT: We're willing to discuss any options, and we've been willing. We would prefer not to do it through an actual hard-cap limit in a permit in the event that there are unforeseen circumstances that occur, like a collapse of the transmission system or a nuclear outage, which is why we're proposing the backstop in point four, which is double the normal amount

of mitigation if, for some reason, we exceed our limits.

These are our actual operating factors over the first five years of the certification. When I presented this slide in the workshop I heard several people comment about putting zeroes in 2002.

Because impacts are based on our actual circulating water flow, and we did not operate the circulating water system during the first year and a quarter of our license period, I and we think it is perfectly appropriate to average in zero, since we had no impacts during those two periods, or during that period.

So if you look at this and sum it up, we basically operated at 25 percent of our maximum permitted levels over the first five years of this license.

Now, point two is that we applied conservative estimate over the second five years of the permit. Now, I believe it was Commissioner Geesman at the workshop said the previous applicants and other projects have made this same request and it has been denied.

I will again, reiterate, this is a

project unlike any that has probably been in front of you before. It is not a brand new project. We have three and a half years worth of actual operating data that certainly can assist us in providing some reasonable forecasts.

Further, we are not trying to estimate our operations over a 30-, 40-year life of a new plant. We're talking about estimating our operations over the next five years. It's a relatively short period of time. I think there's, you know, an extremely low probability of that estimate being off significantly. Particularly when you consider that it's the, you know, it's the characteristics of these units, these 40-year-old units, and the fundamentals of the energy market in California that really drive our operating profile. And those are not expected to change significantly, I don't think, over the next five years.

This is a graph over the last year of the daily Cal-ISO peak load. What you see is illustrative of the energy market in California. It is extremely summer peak driven. During, you know, the spring, winter and fall we've got very moderate temperatures; therefore moderate demand.

It averages about 30,000 megawatts. During the summer temperatures ramp up and you get these significant spikes.

Those plants are in existence; they're there in order to meet demand during the third quarter when the temperature starts ramping up and demand ramps up.

Unless you, for some reason, believe that the temperatures are going to dramatically change during the spring, winter and fall, the shape of this load profile is not going to change significantly. It might, you know, go up a couple percent due to just inherent load growth. But these units are there for the summer period to meet that peak. And they don't do much operations during the offpeak season.

So our proposal is based on these estimates of future operations; largely concentrated in the third quarter with some generation expected in the other quarters, as well.

Point three, and this is another area that makes this proceeding particularly problematic, and that is the ten-year term of this license. You know, we are not Moss Landing, Morro

Bay or El Segundo. This is not a new facility. It's not an indefinite license. It, in effect, ends in 2011.

And to calculate mitigation beyond that period is just unjustified and unfounded and unsupported. And further, you know, I talked a little bit about the reason for the limited term; and one of the reasons being because people want this plant to go away. I can confirm with you there are quite a few stakeholders in the City of Huntington Beach that want us to replace that facility.

And if we limit our mitigation to just the ten-year period it really helps to preserve our options at 2011. Otherwise, we're sitting there in 2011 and we're evaluating a permit extension where we've already essentially mitigated for our impingement and entrainment, and we're evaluating a technology installation, or, you know, elimination of once-through cooling, or we've evaluating a brand new facility.

And if we've already paid to mitigate for the life of this permit, assuming that it gets extended beyond 2011, you are making that the very easiest option for us to choose. And I bet there

are numerous stakeholders that would prefer that that is made the most difficult option for us to make. And that if we're facing trying to renew that permit in 2011, we're looking at an additional mitigation fee that makes the alternative of a new facility or technology or eliminating once-through cooling that much more attractive. That's how I would be looking at this. And also minimizes the potential for over-mitigation.

Point four, we are essentially certain that we're not going to exceed the operating estimates that we've suggested be used. However, things happen. Particularly if something unforeseen happens to the transmission system and a transmission line collapses, or something happens to the nuclear generating units, there is the potential that we could operate more than we are forecasting.

So in that event we are proposing a backstop, and that would be that we compensate for any -- we mitigate for any uncompensated losses at sort of twice the regular ratio. I feel like this is a reasonable compromise. It protects the environment. And still accounts for any

unforeseen events.

If you look at the original wetlands restoration schedule that we were provided in the restoration plan, I don't know if it's phase two or phase three or phase four, but there is a phase of the restoration plan that would not occur until after 2011. So there is still a viable opportunity to provide funding that would go directly to the Huntington Beach Wetlands Restoration project. So it's not like there wouldn't be anywhere for this money to go in 2011 in the event that we did exceed our estimates.

COMMISSIONER BYRON: Excuse me, Mr. Pendergraft. Just to clarify, point four is the item that says the new aspect of your mitigation plan, correct?

MR. PENDERGRAFT: Well, we certainly have never proposed a two-to-one ratio, I know. We talked about compensating for losses at the end of the period, but there were no specifics indicated. So there are elements to this that are new, yeah.

And we hadn't focused much on the wetlands restoration schedule and the fact that the schedule, itself, lends itself to this sort of

staged approach.

Now, let's get down to the details. Alternative one is the preferred alternative for us. We believe it is more scientifically supported because it is based on the goby APF and a direct application of the habitat being restored and the species being sampled.

We have revised APF calculations that we'll submit to the record that support these numbers that are shown on this slide. But if you use actual operations from our first five years and average that with what we propose for the second five years, you end up with an average of seven wetland acres.

Now, when it comes to factoring in the limited permit life, you know, it gets a little more difficult. But the assumption here is that a new power plant has at least a minimum of a 30-year life. So what we've done here is just ratio-ed our ten-year permit with a 30-year life of a typical new power plant, and divided the average APF by three to arrive at 2.3 wetland acres.

And as people have alluded to there is some existing functional value with the Huntington Beach wetlands, so we wouldn't, you know, we

wouldn't claim to get a direct one-to-one benefit, because we're looking at a wetland-to-wetland comparison here. And so we would suggest using a three-to-one ratio as far as determining our final wetland restoration acreage. And what you arrive at is seven wetland acres. That's based on the goby APF calculation, as summarized by Shane and John.

Now, we realize that the science is one of the biggest complicated issues in this whole thing. And we have provided a proposal that is actually based on the science and methodology that was presented and supported by staff, as well as Dr. Raimondi and Dr. Davis.

if you basically run through the same calculations, use our actual operations and their APF methodology you get 50, in this case it's open ocean acres or nearshore coastal ocean acres. You divide that by three based on the limited permit life. You end up with 17. And in this case, since a wetland is admittedly more productive than the open ocean, we're applying the same one-to-one ratio that the staff applied. So you end up with 17 wetland acres of restoration.

Now, I'm a bit confused because we've

seen sort of two different restoration plans. The first restoration plan we saw equated to about $74,000 per acre. A recent plan that was sent last week via email, the cost is lower than that. So this is based on the lower cost.

But, if you take the lower cost per acre from the recent plan you arrive at funding requirement on the order of 400,000 for alternative one; and almost a million dollars for alternative two.

Now, you know, obviously this gives you an idea of how far off we really think we are from where the staff is, and how unreasonable we think their recommendation is. And why do we think what we propose makes sense.

One, as Mr. Steinbeck alluded to, you know, alternative one is based on what we think is a more scientifically defensible assumption as far as the application of the APF.

And even if you don't believe that, and even if you don't agree with what Mr. Steinbeck says, alternative two uses the staff's interpretation of the study results and application of APF. It is using the exact same methodology that they're supporting.

Both of the options balance environmental protection and, and take into account the unique nature of this license that we've reiterated so many times. Further, they don't distort the analysis, and the correct analysis that will be done in 2011 when this license expires. They don't provide a distinct advantage to just us extending the permit because we've already mitigated for all our impingement and entrainment.

You know, the proposals consider that, you know, the 316(b) thing is still up in the air. You got State Lands wanting to get rid of once-through cooling. You've got all kinds of things going on with respect to once-through cooling. And it considers the fact that things may change here in the future.

The 2011 decision point, it fits well with the restoration schedule that we were provided. That that project is planned to extend beyond 2011 if you allow the appropriate amount of time for one phase of the wetland project to establish itself before you go on to the next phase.

And another important point as you start

thinking about funding for the wetlands project. I live in Huntington Beach. The plant overlooks these wetlands. I want nothing more than those wetlands to be restored. But when you come to think about funding, Huntington 1 and 2 are going to be in this same here with 316(b). And I'm just about certain that it will be a source of funding for this project between now and 2011.

The options don't unfairly penalize us. We're really doing the right thing and responding to the crisis. I mean that's really what this is all about. There was an expedited process put in place encouraging people to step forward and meet a need. We did that. And, you know, against our objections the permit was limited to ten years.

And now when we're basically stuck in a box; we've made the investment; we have limited leverage, you're recommending amount of mitigation that assumes we have an infinite life. And that is just unfair and, you know, don't think it's lawful, actually.

Which gets to my last point, if we can reach a compromise resolution on this, which we've tried to do from the beginning, you know, it avoids expensive, disruptive additional

proceedings towhead I don't think any of us really want to go through. And most importantly, units 3 and 4 will continue to be there. They might not need to be running during the fall or winter, but I tell you in July, this last July, we were desperately needed. And that's when we're needed most. And it's important that those units stay in operation.

This is the schedule I referred to. I don't know if it's necessary. But that sort of concludes our presentation. I'm hoping we can find some middle ground here.

CHAIRPERSON PFANNENSTIEL: Mr. Pendergraft, thank you for your presentation. In fact, thank you for the whole AES discussion. I think it was very comprehensive and helped us.

I believe there will be some additional questions from the dais, but we do have some people who have, I believe, remained patiently on the phone. We have Tom Luster from the California Coastal Commission. I would suggest that we hear from everybody and then follow up with some questions.

Is Mr. Luster still available?

MR. LUSTER: I'm here, thank you,

Commissioner.

CHAIRPERSON PFANNENSTIEL: Thank you. Did you have some comments you'd like to make?

MR. LUSTER: Yes, just a few brief comments. This is Tom Luster with the California Coastal Commission. I have just a few brief comments in support of your staff's recommendation.

Basically we believe the mitigation proposed by your staff is both appropriate and necessary for the project. We were involved during the development of the entrainment study during its implementation and during the determination by your staff that the project's entrainment effects are significant and require mitigation.

More recently we provided written comments on the staff's proposed mitigation. And largely concurred with their findings regarding both the approach and the scope of the mitigation.

Our primary concern at this point is that you insure the mitigation plan is properly implemented, and that it include adequate performance standards, monitoring requirements, contingency plans and other similar features of

standard mitigation plans. Because staff has identified a wetland organization with a great deal of expertise in these areas, we believe your decision could easily include these assurances.

I'd also like to offer one additional reason the mitigation is needed, to insure that the project conforms to the Energy Commission's LOS requirement; that is to insure the project is consistent with other applicable laws and regulations, which include the Coastal Act.

One of the Coastal Act requirements is that adverse effects of entrainment be minimized. The Act does not require a determination that these effects be considered significant; only that where there are adverse effects that they be avoided or otherwise mitigated.

The results of the entrainment study clearly show that the project results in adverse impacts. So without this necessary mitigation the project would not comply with the Coastal Act requirement.

Just briefly on the recent proposal by the applicant, it would be nice if the working group had time to review this more thoroughly, but because it's coming with just a couple weeks left

in the certification period, I don't think the working group will be able to commit a good review, and so the only credible proposal we have in front of us at this point is that that's been provided by your staff.

And so with that I'll close. Just a restatement of support for your staff's recommendation. And I'd be happy to answer any questions.

CHAIRPERSON PFANNENSTIEL: Thank you, Mr. Luster.

MR. LUSTER: Um-hum.

CHAIRPERSON PFANNENSTIEL: Are there questions? No.

We also have a written statement from the Santa Ana Regional Water Quality Control Board. Was there somebody on the phone from that organization? Thank you.

Are there questions, further statements from the Commissioner; Commissioner Byron?

COMMISSIONER BYRON: No, I don't have any additional questions.

CHAIRPERSON PFANNENSTIEL: Do you have a --

COMMISSIONER BYRON: Yes. The only

other agency that might be -- is there any other agencies represented that's on the phone right now? Is there anyone else in the audience, any other agency that is represented here? Okay.

First I'd like to thank the staff and the applicant and the other parties for all the useful discussion today. Commissioner Geesman, who's the Presiding Member of our Siting Policy Committee, could not be here today and sent his regrets. And I'm the Associate Member of the Siting Committee.

We spent an informative day at Huntington Beach in late July, I believe July 25th, and heard a much more extensive discussion of these same issues.

Commissioner Geesman and I have reviewed the written materials that have been filed in this matter; and held several discussions about it last week. Based upon our review and consideration of the record, as it existed at the end of last week, we issued a Committee order on Friday stating our recommendations to the Commission.

If I may, let me read from that order: Upon consideration of staff's analysis and all other information and arguments from the staff and

AES, and comments from representatives of the California Coastal Commission, Santa Ana Regional Water Quality Control Board, and members of the public, we find and recommend that the Energy Commission find that the impingement and entrainment impacts are significant. And that the appropriate mitigation for those impacts is the payment of $7,956,000 to the Huntington Beach Wetlands Conservancy for restoration of the Huntington Beach wetlands."

I've not heard anything that leads me to change the recommendation of the Siting Committee that we made on Friday. Because this is a two-part item, the first part's a decision on the amount and use of compensation funds based on condition of certification Bio-5 from the original Energy Commission decision on the Huntington Beach project.

As I indicated, the Siting Committee has recommended that $7,956,000 be paid to the Huntington Beach Wetlands Conservancy for the restoration of the Huntington Beach wetlands consistent with the staff's recommendation in this matter.

The second item that we may be taking up

relates to the possible approval of the request by AES to find the project in substantial compliance with the Energy Commission's conditions of certification, which will allow under condition emergency-2, the project continue operation through September 30, 2011.

For AES to be in substantial compliance it would be necessary for them to have agreed to the mitigation under Bio-5 that we specify here today. So, I think it would be appropriate at this time to hear from AES before we vote on the mitigation recommendation, whether they will, in fact, comply with the Committee's recommendation if it's adopted by the Commission today.

So, I was hoping that a representative of AES would speak to the issue of whether or not they'd comply with this item.

MR. ROTHMAN: Just one quick question, Commissioner Byron. In terms of your statement you've not heard anything today that makes you change your minute order decision. Does that include the dollar figure that was associated with the per-acre restoration?

There was a statement made by Mr. Pendergraft that the staff's recommended dollar

figure, which is what this has now been reduced to as opposed to an acreage that will be then applied to a per-acre restoration figure. That that dollar figure may have changed since the last hearing in Huntington Beach, and maybe since the staff's recommendation.

CHAIRPERSON PFANNENSTIEL: Let me ask Ms. Stone, has that dollar figure changed?

MR. KRAMER: Let me take a stab at that. The $58 number seems quite a bit lower than the number we were using. We did receive, if you will, a -- I forget what they call those things, but one of the project management charts that showed the different stages. And it had estimated amounts attached to each of those.

And we added it up and it came -- it actually came up to, I believe, about $50,000 less than what we had as of the time we wrote our analysis. But that's not the difference between 74,000 and 58,000. That's quite a bit bigger difference. So we're not quite sure about that $58,000 number at this point.

We do have representatives from the Conservancy in the audience. And they may be able to address that.

CHAIRPERSON PFANNENSTIEL: If there's an uncertainty in that number that would make a material difference in the total amount approved, I think we should hear that. I did note that you had looked at two different -- that AES' calculation was based on a couple different numbers. Perhaps you can explain to us where you got your two numbers?

MR. PENDERGRAFT: The original number came from this restoration plan that was provided by Moffatt and Nichols. Last week, I think at the request of the CEC Staff, Moffatt and Nichols, in conjunction with the Wetlands Conservancy, sent a revised schedule.

And if I add up the numbers on this revised schedule I get 7.925 million dollars, or $7.9 million, which is interestingly extremely close to the number that you're recommending for mitigation.

And when I divide that by the fact that it's supposed to cover Talbert, Magnolia nd Brookhurst Marsh, which is 137 acres worth of wetlands, I get $58,000.

I subsequently asked for a clarifying question on that of Mr. Gorman of the Wetlands

Conservancy. And he said we have reduced the contingency and engineering costs due to more confidence in the design and our effort to sharpen our pencil and get the cost within the most reasonable amount possible to accomplish the work. We are trying to remain within the Energy Commission's suggested $7.9 million budget. And we feel that is possible to do. Thus, the lower cost numbers.

MR. KRAMER: Madam Chair, I'd suggest that we take a five- or ten-minute break so staff could caucus on that question. If that's going to help resolve this issue, I think it would be helpful for us to have some discussions with the Conservancy representatives.

MR. ROTHMAN: To be fair --

CHAIRPERSON PFANNENSTIEL: Yes, --

MR. ROTHMAN: -- I'm sorry. Counsel for AES again. To be fair I was simply posing that as an initial question. I was not implying that simply by resolving the difference between 58,000 and 70,000 that that was going to be determinative of AES' position with respect to an order that would be based on the 104-acre wetlands restoration as being roughly proportional, because

we disagree with that determination. And we think that it is inconsistent with the CEQA guidelines requirement of rough proportionality.

We've taken the position, as you've heard in our presentations, with respect to why we think it doesn't meet the requirements; and why it is inconsistent with both the actual operating conditions at the facility, the term of the certification, and the science and the studies that were justifying the underlying determinations of the restoration equivalency for entrainment.

So, I don't want there to be any misunderstanding. We are not -- I was asking the question because I think it is relevant. It is not going to be determinative of a decision by AES.

COMMISSIONER BOYD: Madam Chair, I kind of inferred from the presentation, and I certainly infer from this last answer that I don't see forthcoming a positive response to Commissioner Byron's question regarding item B here. So I don't want to represent the company, but it doesn't sound like we're that close to resolution.

CHAIRPERSON PFANNENSTIEL: I have a question of the company. What is the total

estimated cost of the Huntington Beach retool of units 3 and 4?

MR. PENDERGRAFT: What was it originally estimated to be, or what did it turn out to be?

CHAIRPERSON PFANNENSTIEL: The latter.

MR. PENDERGRAFT: It turned out to be about $220 million, which is about three times what we estimated.

CHAIRPERSON PFANNENSTIEL: Thank you.

MR. PENDERGRAFT: It has not been a good investment. And if you are asking me to say right now whether I want to agree or not to $8 million, I'd actually request five minutes for us to caucus, if that's acceptable.

CHAIRPERSON PFANNENSTIEL: That would certainly be acceptable. What I'm trying to do in my mind is put the questions that I think you legitimately raised before us about the future of the plant and what happens in 2011, and what are the going forward operational characteristic of the plant, in some kind of financial context.

You asked when we come up to the time of the license, the 2011 end of the license, and we already have $8 million sunk, if you will, in the wetlands restoration, won't that drive our future

decisionmaking.

And I was trying to see that in a context of the total cost. However, that was the reason for my question. If each side would like about five minutes to caucus, why don't we do that, and then come back on the record.

MR. PENDERGRAFT: Just one follow-up. Regardless of how much we have invested to date, or how much we may or may not invest in this mitigation, the decision in 2011 will always be an incremental investment decision. It will, you know, not really consider what's sunk, so.

CHAIRPERSON PFANNENSTIEL: Okay, we'll be back in five minutes.

(Brief recess.)

CHAIRPERSON PFANNENSTIEL: All right, we'll be back on the record.

Well, let's just see whether either party has some news to convey to us.

MR. KRAMER: On the point of the $58,000 per acre versus $74,000, we spoke to the Conservancy representatives and they can provide more detail if you need it. But they believe that was a misunderstanding. They believe the correct cost upon which to base the mitigation is the

$74,000 per acre. And therefor the number that the staff has in its analysis is the correct number for the mitigation of the 104 acres.

CHAIRPERSON PFANNENSTIEL: Thank you, Mr. Kramer.

And then, applicant?

MR. ROTHMAN: Well, based on our -- well, obviously that's off the table. But in terms of our conversation, I'll tell you that it was a -- it's a difficult conversation to have in the hall on the timeframe that we were provided.

And it's a disappointing position that we find ourselves in, because as I think we understand it, your next decision is going to be premised on whether we accept a number that is ten times what we think is an appropriate level of mitigation, or eight times, or nine times, somewhere in there.

And that is something that the company is not prepared to commit to without at least exploring, and we don't really view this thing as a negotiation. That wasn't the thought process coming to this hearing today.

Nor was it the thought process that the presentation that we made would have absolutely

zero impact whatsoever in terms of properly taking into account the limited life of the permit. And the actual operations of the facility in terms of scaling of the mitigation.

So, we say this with advisedly a lump in our throat, but we are interested in whether the Commissioners an the staff and the people involved in this process would even contemplate a number, whether it be calculated based on staff's numbers and then discounted for some factor associated with the actual operations or associated with the limited life of the permit, so that we're not -- so that we're somewhere in between the million-dollar level of mitigation that we think is at the high level of what is appropriate versus the nearly $8 million proposal.

And there are many ways to do that. We would view the proper way of doing that as basically scaling up from our 17-acre number to a number that's probably more like three times that based on that three-time factor. We don't have it all up there, but there's a three-time factor that we took into account that you could undo for the purposes of a different number.

And, again, I did not come here

prepared, nor did Mr. Pendergraft come here prepared to enter into this as a negotiation. What we did come here prepared to do was let you know that we think that the number that is being presented is not justifiable and is not justified.

We'd rather not, just as a general principle, have this devolve into us saying, no, we are not willing to agree to that number. Have you all then decide that that is the basis upon which you will not extend the permit for the next five years, and have all of us running to court on preliminary injunctions and the like.

And we'd like to see if, at least know whether there's any openness to exploring whether there's a compromise position. If there's not, then I think we need to talk for another couple minutes because it's going to be a major decision for the company in terms of its legal exposure, and its reporting requirements and its internal reporting, as well.

MR. PENDERGRAFT: Just to add, I mean if you throw out the science, which is admittedly confusing and can be interpreted in any different number of ways, we made two other arguments that, you know, were somewhat compelling in my opinion,

and that's the limited term of the license and our actual operations.

We're willing, you know, maybe it's the term of the license that doesn't really excite you about limiting that. We'd be okay with that. The staff was previously -- they previously accepted a limited flow rate.

Commissioner Geesman, at the workshop, said he wasn't interested. But that is a reasonable middle ground compromise that I think would be acceptable.

CHAIRPERSON PFANNENSTIEL: Let me ask Mr. Ratliff, what options do we have on timing right now? What are the issues constraining moving forward with this?

I fully concur with the applicant that this is not the time and place for a negotiation. And most of what we heard today, I believe, is already in the record of this proceeding. And those of us who followed the record and tried hard to prepare for today had seen a lot of this information before, perhaps in different forms.

But, we're now at a decision point both from the whole Commission, we know where the Siting Committee has come down on this. The

Commission has two separable decisions to make today.

And as I understand, we're sort of the end of our time to make these decisions. But, let's hear from counsel on what our flexibility might be.

MR. RATLIFF: Well, because of the conditions that were adopted with the original emergency licensing decision, this license will expire automatically on September 30th unless this agency acts to either -- to basically do two things.

The first one being to determine whether there is a significant impact and the degree of mitigation required for that impact.

And secondarily, it has to make an affirmative finding that the applicant is in compliance with condition emergency-2, I believe it is, which requires specifically a finding that the applicant is mitigating or has mitigated its impacts from impingement and entrainment.

Because the time is so short the only thing that you can do other than make those decisions today is to continue to the next business meeting where -- you can continue either

of those decisions to the next business meeting or you can continue one of them if you prefer.

But that would be the last scheduled date for this Commission to actually make a decision on either of those items.

COMMISSIONER BOYD: Mr. Blevins, what is that date?

EXECUTIVE DIRECTOR BLEVINS: September 27th.

CHAIRPERSON PFANNENSTIEL: And between now and then we would attempt to reach some resolution between the staff number of 7.9 million and the applicant number of something under a million to come back to this Commission with some either compromise number, or at least a narrowing of the two positions on it.

I have to say I've heard nothing today that makes me believe that we really can narrow that discrepancy. Because I believe that the underlying factors in both of the calculations are one that both parties believe in quite strongly.

I think that the scientific evidence on both sides is what it is, and now it's up to the Commission to decide how to use that evidence in a fair level of mitigation costs.

Though if we were to put this off to our next business meeting and allow some discussion to go on, is that a wise use of the remaining two weeks given us? Would that make a difference?

MR. ROTHMAN: I can only say that if there is any openness on the part of the Commission or its staff to seek a position that is somewhere in the middle, I can tell you that from AES' perspective there is not only openness but a desire to avoid what will otherwise be, I think, an expensive and time-consuming and cumbersome proceeding.

So, we certainly think -- I guess the way to answer that question in the best way I know how, is yes, we have some flexibility in terms of what we are willing to commit to; that there is certainly an openness on our part to discuss alternative, not only mitigation approaches, but alternative justifications for an overall mitigation package.

Having said that, there's zero flexibility on the part of the Commission and the staff. And if it's going to be a discussion of 104 or nothing, then I'm not convinced that it will get us any further along.

CHAIRPERSON PFANNENSTIEL: Commissioner Byron.

COMMISSIONER BYRON: Madam Chairman. Just to clarify from the Siting Committee's perspective, contrary to what Mr. Pendergraft said, we're not throwing out the science, the recommendation of the Committee is based upon science. We're not negotiating a dollar figure and when we make our recommendation.

I think we are in the final couple of weeks here for the chance for a business meeting. It's going to be very difficult during that time to schedule an opportunity for the Siting Committee to hear and make a determination on any other recommendations you might have.

And as the Chairman had indicated, based on the record we really haven't seen anything substantially changed. And as I said, the recommendation of the Siting Committee is based upon science and we think that the staff's recommendation is a good solution to this issue.

COMMISSIONER BOYD: Madam Chair.

CHAIRPERSON PFANNENSTIEL: Yes, Commissioner Boyd.

COMMISSIONER BOYD: I almost think it

would be unfair to remand this back to the Siting Committee, so -- but I think I'm prepared to make a motion that we continue this item to the next meeting. And that we, in effect, remand it back to the staff and the applicant to see if there is any daylight that they can see at all.

And if not, then we face the inevitable at the next meeting. But I haven't totally lost faith in the human race, and there may be a chance here of the two tribes coming out of their respective caves and actually going out around the bonfire and doing something.

And I, for one, am willing to give it a try. And I would say in the spirit of full disclosure to perhaps the applicant, that I'm painfully familiar with this project, having served on the last Governor's generation team. I lived through everything that was involved with the state's trying to get this facility licensed and built. And I don't have a real warm spot in my heart for that experience.

But nonetheless, I would be willing to see if some reconciliation could be attained in that we have a couple of weeks.

CHAIRPERSON PFANNENSTIEL: Before we

vote on your motion, let me ask the staff, what is your sense, Mr. Blevins, on staff willingness to continue discussions?

EXECUTIVE DIRECTOR BLEVINS: First of all, Madam Chairman, relative to respect, Commissioner Boyd's statement, just in terms of being, make sure that the information is out there for consideration, from a process standpoint, it is procedurally possible, without looking at anyone's schedule, but it is procedurally possible to, in fact, have a Siting Committee hearing in advance of the September 27th business meeting.

And that presumably would be whether or not the Siting Committee would be willing to explore, you know, the issue of a reduced operation, which is would be going back and re-exploring based on the prior record.

I think what we are going to need is a little bit more direction, and I'm going to let my friend here ask for that in terms of what the Commission's expectation would be coming into the September 27th meeting in the absence of a Siting Committee hearing.

CHAIRPERSON PFANNENSTIEL: Well, let me, first, Mr. Ratliff, is there any need for a Siting

Committee altered decision? Is there a need for a Siting Committee hearing on this where the possibility of the Siting Committee to come up with a different conclusion. Or is this now in the Commission's lap, so that we can come in on the 27th with ourselves as hearing any changes that might be?

MR. RATLIFF: It's within your discretion to have the Siting Committee hold an additional hearing on this matter.

CHAIRPERSON PFANNENSTIEL: Or not?

MR. RATLIFF: Or not, yeah.

CHAIRPERSON PFANNENSTIEL: Thank you. Mr. Kramer, you had a comment?

MR. KRAMER: Well, I didn't have any specific questions. I just wanted to offer that we would appreciate any direction that you could give us at the staff level, if we're to go back and try to work something out.

CHAIRPERSON PFANNENSTIEL: Commissioner Byron.

COMMISSIONER BYRON: If I may, on behalf of the Siting Committee, I think the staff has done an excellent job. It's not the staff that's put our backs up against the time constraints that

we're currently facing.

I think the burden here is on the applicant to demonstrate a willingness that goes far beyond what they've proposed here today to meet the desires of the Siting Committee's findings. I should say that differently, to meet the Siting Committee's finding.

So I hope that's helpful. I think it's really incumbent upon the applicant to come forward with a much more substantial proposal that's consistent with the Siting Committee's finding.

MR. PENDERGRAFT: Can I just clarify. I'm not often in these types of proceedings, and I may have misspoke. I didn't mean to say throw out the science. I meant to say if you agree that the two sides have disagreement over the science, and you accept the staff's position on the science, and you just focus on the two facts of the limited term of the license and the operating characteristics of the units, I think we may be able to reach a compromise.

I wasn't meaning to imply that we just disregard the science. I apologize for that.

CHAIRPERSON PFANNENSTIEL: For the sake

of giving all possible time for consideration, I'm going to second Commissioner Boyd's motion to continue item 2, both parts a and part b, for the purpose of seeing if we can find some common ground to come back to this Commission, to the full Commission. I think it need not go to the Siting Commission for further hearing.

I feel that what we heard today was a committee of the whole, if you will, on the fact base. I don't think that we need to re-argue the fact base. I think that the science is in front of us. And had ample opportunity to consider it and ask questions on it.

I think now we need to move forward with is there some application of science and the operating characteristics of this plant that brings us back to a, I believe, a very reasoned approach that the staff and the Siting Committee offered to us.

We're starting at a point of a lot of time has passed, a lot of work has been done. And now we're at the last Commission conference to make a decision on this before the license just might expire. So I don't think it's incumbent on any of us to let that happen. I think we need to

act on this one way or the other at the next Commission meeting.

COMMISSIONER BOYD: Madam Chair.

CHAIRPERSON PFANNENSTIEL: Commissioner Boyd.

COMMISSIONER BOYD: I would like to state for the record that I don't want my motion to be interpreted to preclude the Siting Committee from having the opportunity to have a hearing, should they so wish. I'm just saying I'm not going to -- I didn't mean to include in my motion that it should be remanded back to them, obliging them to have such a hearing.

CHAIRPERSON PFANNENSTIEL: So it has been moved, and I've seconded your motion to continue. Is that acceptable?

COMMISSIONER BOYD: Um-hum.

CHAIRPERSON PFANNENSTIEL: Unanimously approved. So we will be back on the -- what was the date? The 27th.

Thank you all for a fruitful conversation.

We need to finish this agenda and then we're going into a very brief executive session thereafter.

COMMISSIONER BOYD: I'd move approval of the minutes for the meeting of August 30th.

CHAIRPERSON PFANNENSTIEL: Second?

COMMISSIONER BYRON: I second.

CHAIRPERSON PFANNENSTIEL: Minutes of August 30th have been approved.

Any Commission Committee presentation discussion, Commissioners?

COMMISSIONER BOYD: No.

CHAIRPERSON PFANNENSTIEL: Hearing none. Chief Counsel report. Ms. Ichien, is there a report?

MS. ICHIEN: Yes, there is. I just wanted to report for the record that last Friday the Federal District Court --

CHAIRPERSON PFANNENSTIEL: Excuse me, can people take their conversations outside of the room.

COMMISSIONER BOYD: Get close to the mike, Arlene; you're going to have to out-shout these people.

MS. ICHIEN: Last Friday the Federal District Court in Sacramento issued an order with respect to the appliance litigation that was begun in 2002. And the order, in effect, dismissed all

of the counts that were filed by the appliance manufacturers trade associations against the Energy Commission and individual Commissioners.

And in the meantime, in the last two months since the U.S. Supreme Court declined to reconsider the Ninth Circuit's decision which upheld the Commission's regulations, the staff and representatives from the appliance manufacturers trade associations have met to discuss the scheduling of data submittals; and also technical changes that are required as a result of changes in federal law that have occurred.

And the order that was issued last Friday endorses the agreement that the parties have reached on those, on the schedule and the technical changes.

CHAIRPERSON PFANNENSTIEL: Excellent.

COMMISSIONER BOYD: Congratulations.

CHAIRPERSON PFANNENSTIEL: Yes, congratulations to you.

COMMISSIONER BOYD: And hallelujah.

MS. ICHIEN: And big congratulations to Jonathan Blees --

CHAIRPERSON PFANNENSTIEL: Yes, very much so.

MS. ICHIEN: -- for shouldering the burden the entire four years.

CHAIRPERSON PFANNENSTIEL: Any other report? Executive Director's report.

EXECUTIVE DIRECTOR BLEVINS: Madam Chairman, I have no report, and I've spoken to Mr. Smith and he has no report.

CHAIRPERSON PFANNENSTIEL: Oh, excellent. Public Adviser report.

MR. BARTSCH: Madam Chair, Nick Bartsch representing Margret Kim. We do not have anything new to report at this time.

CHAIRPERSON PFANNENSTIEL: Thank you, Nick.

MR. BARTSCH: Thank you.

CHAIRPERSON PFANNENSTIEL: Any public comment? Hearing none, we will adjourn for a brief executive session to discuss the personnel matter in my office.

(Whereupon, at 1:02 p.m., the public business meeting was adjourned into executive session.

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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 25th day of September, 2006.