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BUSINESS MEETING

BEFORE THE

CALIFORNIA ENERGY COMMISSION

In the Matter of:)
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Business Meeting)
_____)

CALIFORNIA ENERGY COMMISSION

HEARING ROOM A

1516 NINTH STREET

SACRAMENTO, CALIFORNIA

WEDNESDAY, JANUARY 12, 2011

10:00 A.M.

Reported by:
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Commissioners Present (*Via Phone)

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

Staff Present:

Melissa Jones, Executive Director
Jonathan Blees, Chief Counsel
Lynn Sadler, Assistant Public Advisor
Harriet Kallemeyn, Secretariat

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Others

Interested Parties:

Allen Breese, Calgren

Public Comment:

Rochelle Becker, Alliance for Nuclear Responsibility

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b. University of California, Santa Cruz. Possible approval of a no-cost amendment to Agreement PIR 08-003 with the University of California, Santa Cruz to add a post-doctoral position requiring advanced statistical skills.

c. City Of San Juan Capistrano. Possible approval of an amendment to Agreement CBG-09-018 with the City of San Juan Capistrano to reallocate the budget funds, moving $141,900 from the "Materials/Supplies" category to "Non-Labor Contract Expenses" so that the purchase and installation of streetlights can be streamlined and performed under a single contract.

d. Digital Energy, Inc. Possible approval of Amendment 2 to Contract 400-07-026 with Digital Energy, Inc. for a one-year no-cost time extension to March 31, 2012. The contract provides technical assistance and support to the Energy Commission's Bright Schools, Energy Partnership, and Energy Efficiency Financing programs.

e. California Institute for Energy and Environment. Possible approval of a three month no-cost time extension to PIER Work Authorization MRA-02-083 with The Regents of the University of California, - California Institute for Energy and Environment under Master Research Agreement 500-02-044 to ensure all work is completed.

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   b. Colorado State University at Fort Collins, Advanced Control Techniques and Sensors for Gas Engines, $95,000. The goal of this project is to determine the feasibility of a novel control and sensor system in conjunction with an electronically programmable carburetor, for industrial natural gas engines to precisely control the Air/Fuel (AF) ratio. This project expects to reduce emissions and operating costs of industrial natural gas engines.

   c. MAHLE Powertrain LLC, Novi MI, Advanced Low Temperature Natural Gas Combustion using Turbulent Jet Ignition, $95,000. The goal of this project is to increase natural gas vehicle efficiency using turbulent jet ignition technology, and develop it as a direct replacement of the spark plug in a vehicle based natural gas engine.

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b. Miami University, Oxford, OH, Development of Flexible Dye Sensitized Solar Cells, $94,931. This proposal seeks to reduce the cost of dye sensitized solar cells by developing materials that would allow this renewable technology to be manufactured as flexible thin-film cells.

c. NanoRIS, Citrus Heights CA, Fabrication of Doped Nanowires for High-Temperature Thermoelectric Materials, $94,780. This project will determine the feasibility of advancements in high temperature thermoelectric materials by incorporating nano-technology and doping techniques.

d. Lighting Research Center, Rensselar Polytechnic Institute, Troy, NY, High-Efficiency LED-based Linear Fluorescent Replacement Lamp, $95,000. This project will determine the feasibility of developing an LED based lamp that will effectively replace four-foot linear fluorescent bulbs in existing fixtures.

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P R O C E E D I N G S

JANUARY 12, 2011 10:04 a.m.

CHAIRMAN DOUGLAS: Good morning. Welcome to the California Energy Commission Business Meeting of January 12, 2011.

Please join me in the Pledge.

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

CHAIRMAN DOUGLAS: Commissioners, staff, everybody, welcome back for our first Business Meeting of 2011. I will start with the Consent Calendar, Item 1.

VICE CHAIR BOYD: Move consent.

COMMISSIONER BOYD: Second.

CHAIRMAN DOUGLAS: All in favor?

(Ayes.)

That item is approved. I forgot to say that Item 4 will be moved to the next Business Meeting, so Item 4 is not going to be taken up today.

COMMISSIONER BYRON: I'm crushed.

VICE CHAIR BOYD: Just because you won the Orange Bowl, don't think you get everything.

CHAIRMAN DOUGLAS: Thank you! Item 2 –

COMMISSIONER BYRON: Madam Chair, that comment, for the people here, Item 4, as I was

reviewing it, I think, is the only time I can remember that we approved a PIER research contract in my tenure here with Stanford University, so that is why my comment is that I'm crushed.

CHAIRMAN DOUGLAS: I understand that, you and I as the Stanford grads, me from the Law School, you know, have enthusiastically –

VICE CHAIR BOYD: I'm out-gunned today. Well, no, I've got Jonathan here.

CHAIRMAN DOUGLAS: -- we have enthusiastically supported many great proposals from the Cal system and, as Commissioner Byron says, this is the first one that I remember seeing as a PIER grant from Stanford. But, in any case, we will have the opportunity to take that up at a future date.

Item 2. Calgren Renewable Fuels, LLC. Possible approval of Agreement ARV-10-033 for a zero-cost Participant Agreement with Calgren Renewable Fuels, LLC to establish the program requirements for participation in the California Ethanol Producer Incentive Program (CEPIP). Mr. Rillera.

MR. RILLERA: Good morning, Chairman and Commissioners. My name is Larry Rillera, I'm with the Division of Fuels and Transportation. In 2009, the Commission approved the first AB 118 Investment Plan

that identified development of Ethanol Producer facilities in the state. Subsequently, the Commission approved the California Ethanol Producer Incentive Program, or CEPIP, with an initial allocation of $6 million. The CEPIP stimulates in-state ethanol production, charts a course for reduced carbon intensity in either production processes, or in the use of alternative feedstock. CEPIP has the benefit of job creation and retention, local and regional economic development, while meeting the objectives of the AB 118 program. It should be noted that eligibility for CEPIP payments will not begin until facilities are fully operational. The CEPIP further requires payments back to the state when market conditions are favorable.

In June 2010, the Commission released Program Opportunity Notice No. 09-607 to solicit applicants to the CEPIP. Also, in June 2010, the Commission approved Interagency Agreement 600-09-017 with the California Alternative Energy and Advance Transportation Financing Authority, or CAETFA, to provide financing assistance needed to implement the CEPIP. In July 2010, the CAETFA Board approved the Interagency Agreement with the Commission.

Under this item today, the Commission will

consider approval of a zero cost participant agreement with Calgren Renewable Fuels, LLC to establish the program requirements for participation in the CEPIP, including tasks for detailing the carbon intensity reduction milestones and conditions for CEPIP payments from and reimbursements to CAETFA. It should be noted that the agreement contains provisions requiring Calgren has a continuing obligation to meet carbon intensity reduction timelines, even if the CEPIP funds run out. Calgren has the capacity to produce up to 58 million gallons of ethanol per year while providing jobs and economic benefit, impacts critical to this area of the state. Staff would ask for Commission support.

CHAIRMAN DOUGLAS: Thank you, Mr. Rillera. We have a member of the public who would like to speak on this item, Allen – and I'm struggling with your last name – maybe Breese, with Calgren. If you could come forward?

MR. BREESE: Thank you. I just want to thank the Commission for their consideration of the Ethanol production in the Calgren plant. This program is actually vitally important to the production of ethanol in California. California plants produce the lowest carbon intensity ethanol in the country. The

ethanol industry in California is in its infancy and this type of support will enable the industry to develop and grow. Producing ethanol in California makes a lot of sense because it brings an investment, it creates jobs and development opportunity. And, again, I should like to thank the Commission for their consideration of this incentive program. Thank you.

CHAIRMAN DOUGLAS: Thank you, Mr. Breese. I have a quick question. Could you describe some of the measures that Calgren will be undertaking to improve, reduce, the carbon intensity of the ethanol it produces?

MR. BREESE: Yes, at the moment, as I say, California is the lowest carbon intensity in the country, but we are already looking at ways of reducing that carbon intensity by capturing some of the carbon dioxide, which is given off by the electricity generation process, and also using alternative feedstock which, again, will reduce the carbon intensity.

VICE CHAIR BOYD: I have no questions. I would comment that this proposal, as well as this entire program has been the subject of significant and lengthy discussions by the Transportation and Fuels Committee, and we did review and recommend approval of

this particular item today from Calgren, so we support the staff's recommendation.

COMMISSIONER BYRON: Madam Chair, my question might be for Commissioner Boyd, but I'll direct it toward Mr. Rillera, just because he is presenting. I know we've done a number of these CEPIP agreements already and they're in place; I don't quite know how to phrase my question, it has more to do with the exposure of the organization, is there a cap to the potential incentives that the Energy Commission may be providing under this program? Are we protected?

MR. RILLERA: Yes, there is a cap in terms of the funds that is linked to their production capacity, and then the calculation that the Commission would do on that production capacity on a per producer basis. The Commission has approved three of these CEPIP agreements and this is the fourth. The value of the cap is $2 million per producer, excuse me.

COMMISSIONER BYRON: Altogether per producer, okay. Thank you.

VICE CHAIR BOYD: I would say, Commissioner Byron, in response to your question about exposure that this program is not very popular in some corridors, and yes, we do bear some exposure. There

is a rumor that this was done by this agency as under orders from the past Governor who was seeing that this program was put into place as a favor to a political friend; I can speak for myself and my exposure to this over months, well, actually it's well over a year since this has been debated, and the Governor never contacted our committee, to the best of my knowledge, nor was the individual cited contacted by the committee. This program was launched on its merits some time ago after lengthy debate and lots of questions, and lots of conditions put into the program, and the merits were on the fact that California will consume in excess of a billion gallons per year of ethanol. The Federal Renewable Fuel Standard requires expansion of that. Heretofore, we've gotten our ethanol from the Midwest, corn derived, in tank cars from facilities that aren't as new, modern, and as clean as the California facilities. And when we did a carbon footprint analysis of having it produced in California vs. having it produced elsewhere, it came out a net positive for it to be done in California – newer, more modern facilities, less drying of the distillers grain for cattle feed, etc. etc., so as long as that is a fact, coupled with the fact that this program is the

only program in the nation I'm aware of that, as a condition of providing any assistance, requires efforts on the part of the applicants to change their carbon footprint, to improve their carbon footprint, I think, makes this a good deal for California in terms of employment, the utilization of capital invested in the State, taxes derived by local areas, etc. etc. And it's a shame that it has this millstone around its neck as being done as purely a political favor for somebody which, to the best of my knowledge, is entirely not true, certainly not on the part of this agency. So, yes, there is a price associated with this program, but as indicated this Commission has approved three and has a fourth before it.

COMMISSIONER BYRON: Well, thank you, Commissioner, for your candor. It is unfortunate that this kind of unfounded rumors do circulate and I certainly trust your judgment. And, Mr. Breese, I would like to thank you for being here. Madam Chair, I would like to move the item for approval.

VICE CHAIR BOYD: Second.

COMMISSIONER DOUGLAS: All in favor?

(Ayes.)

The item is approved. Thank you.

Item 3. AANKO Technologies, Inc. Possible

approval of Contract 600-10-003 for $249,525 with AANKO Technologies, Inc. to revise California's Energy Assurance Plan and Energy Supply Disruption Tracking Process. May I ask you to say your last name? Well, welcome, please present.

MS. KIRANOVA-GIVENKO: Yelena Kiranova-Givenko.

CHAIRMAN DOUGLAS: Thank you. Please present.

MS. KIRANOVA-GIVENKO: Thank you, Commissioners and, again, I am Yelena Kiranova-Givenko, the Project Manager for the Energy Assurance Planning Program in Fuels and Transportation Division. I am here to present the contract with AANKO Technologies. AANKO Technologies is a certified CMAS consulting company located in Vacaville, California. The results of this contract will be used to assist staff with fulfilling the requirements of a grant from the Federal Department of Energy. The main task of this contract is the revisions of the State Energy Assurance Plan and Energy Supply Disruption Tracking process. In addition, the contractor will assist staff with planning and conducting two energy emergency exercises, one regional and one intrastate. AANKO Technologies was selected through a competitive

process as the most qualified applicant. This contract has been previously approved by ARRA Ad Hoc Committee and Transportation Committee. I recommend the approval of this contract and would be happy to answer any questions at this time.

COMMISSIONER BYRON: Ms. Kiranova-Givenko, I note that the last time we revised this document was about 2006. Is that normal? Or, I guess I should ask is there a requirement on how often we revise this plan?

MS. KIRANOVA-GIVENKO: To my knowledge, there is no requirement. We are doing this as a – in 2009, we received a grant from the Department of Energy and they are encouraging us to do that. They put in their requirement on doing this, but there is no timeline, to my knowledge.

COMMISSIONER BYRON: Well, that is only a second good reason to do it, obviously, we need to update this document periodically, and if the Feds are willing to pay for it, that sounds like a good idea. Ms. Jones, do you want to add something?

MS. JONES: We have in the statute a mandate to do contingency planning –

COMMISSIONER BYRON: Yes.

MS. JONES: -- and we normally do the report

every five years, I can't tell you when the last one was done, but it may be time to revisit and this will help us do that.

COMMISSIONER BYRON: I believe it is 2006. I was looking at it last night to refresh myself, as well, with our contingency plan.

MS. JONES: Good, thank you.

COMMISSIONER BYRON: Thank you.

VICE CHAIR BOYD: Well, just to build on that history, and Ms. Jones can correct me if my memory is wrong, but the emphasis in the past, if I'm not mistaken, has been more on transportation fuels. And our plan has been pretty well up to date, there has been a self-generated or something generated by the staff, but as in accordance with statutory requirements. This is a significant expansion of energy assurance to all energy sources, and that's why the funding was included by DOE as part of the ARRA program, and thus this was financed through that, vetted initially in the ARRA Ad Hoc Committee, and then in recognition of the fact that it also will include the longstanding transportation fuel emergency plan, it was also then vetted quickly recently by the Transportation and Fuels Committee. So this will be perhaps the most comprehensive energy assurance plan

that this agency has produced.

MS. JONES: In the past, our focus has been on the fuel allocation responsibilities we have during a fuel disruption, and we have looked at other sectors a little bit more, but you are right, this is the most comprehensive.

CHAIRMAN DOUGLAS: Okay, thank you for that. Do we have a motion?

VICE CHAIR BOYD: I'll move approval.

COMMISSIONER BYRON: And I'll second.

CHAIRMAN DOUGLAS: All in favor?

(Ayes.)

The item is approved. Thank you.

Item 5. Edison Material Technology Center. Possible approval of Agreement PIR-10-058 for a grant of $250,000 to Edison Material Technology Center to conduct research and development of a very dense 100 percent liquid-cooled computer platform for data centers. Mr. Roggensack.

MR. ROGGENSACK: Thank you. Good morning, Commissioners. My name is Paul Roggensack with the Public Interest Energy Research Program, the Industrial Agricultural and Water Team. We are requesting approval of a $250,000 grant for a term of 24 months to the Edison Materials Technology Center

for the very high dense liquid-cooled platform project for data centers. This grant will be matching a ARRA grant, American Recovery and Reinvestment Act grant, for almost $3 million. The project will construct two prototype high performance platforms that are 100 percent liquid-cooled. These would replace the technical data centers server rack. The computer platform will address the space and heat transfer issues associated with using air cooling for the increased density of electrical equipment in data centers. The replacement of air cooling with liquid is expected to reduce the energy requirements of a typical data center by 45 percent and a smaller footprint required for equivalent computing power will reduce the construction costs of new data centers by 36 percent.

M-Tech estimates that this technology could achieve a 29 percent market penetration in the data center market by the year 2015, and the energy savings in data centers in California would be approximately one billion kilowatt hours per year in the year 2015.

The project has industry support and sponsors including Intel Corporation, who has donated the Central Processing Units for the compute modules, and is interested in this design for their high

performance computing applications. Also, Emerson Power will provide the cooling infrastructure, power distribution units, racks, and manpower for the product development. And Emerson Power is also the owner of Liebert Cooling Systems, which has a substantial data center customer base with worldwide applications. So, we are requesting approval of this project, which will bring in almost $3 million of ARRA stimulus funding to the State, and I would be happy to answer any questions.

CHAIRMAN DOUGLAS: Thank you, Mr. Roggensack. Questions?

COMMISSIONER BYRON: Thank you. Madam Chair, I think this is one of those projects where we provided co-funding up to 10 percent – or, sorry, 10 percent or one million dollars. I thought this was a very innovative approach on the part of the PIER Program. Mr. Roggensack, do you have any sense or knowledge, did our co-funding help them at all in winning this award from DOE?

MR. ROGGENSACK: I think so. PIER was actually involved with this technology from its initial stages, the initial founder of the technology was a company called Clustered Systems, and they received an Energy Innovative Small Grant award from

PIER, and they also received CIEE funding for further development beyond the proof of concept stage, so this is a further development beyond those initial prior developments.

COMMISSIONER BYRON: I don’t think we can ever fully document that kind of incentive that our co-funding adds, but I think it’s another good example of how PIER funding was helpful in attracting additional research dollars to California. I’m certainly in favor of the project.

VICE CHAIR BOYD: I, too, am very supportive of this project for a host of reasons, one of which is in concurrence with Commissioner Byron, that this is another great example, deserves a side bar and some report in the not too distant future about the benefits of the PIER Program and how a small grant has grown into what appears to be an industry that we have identified in previous IEPR’s and in our concerns about electricity consumption in the state as an area of great concern, that is, the demands by the IT industry in electricity and the cooling requirements, and what have you. So, if this proves out, as I trust it will, this is a definite winner in a multitude of ways, a successful small investment by the PIER Program, a reduction in electricity consumption, and

thus cost, to California business and to Californians, in general, for what is becoming a substantial plug load in our lifestyle – the huge demands of the data centers. So, I am very supportive of this and I'll second any motion that is made, and hope that this proves out as soon as possible as something that can get installed and that the penetration rate can far exceed the 29 percent by 2015. We should be able to do better than that. But it sounds like the right folks are plugged into this – pardon the pun.

COMMISSIONER BYRON: Madam Chair, you're surrounded by the R&D Committee. I remember having a discussion with the Chief Scientist at Sun about eight or 10 years ago, and they were just anathema to the whole notion of bringing water into the data center for cooling purposes, and it is great to see this kind of transformation taking place. Of course, he said even at that time they were discussing it or looking at it, so it is great to see if now finally being applied. I will finally move the item.

VICE CHAIR BOYD: Second.

CHAIRMAN DOUGLAS: All in favor?

(Ayes.)

The item is approved. Thank you, Mr. Roggensack.

Item 6. University of California, Davis. Possible approval of Contract 500-10-030 for $299,970 with the University of California, Davis to evaluate the effects of climate change on hydropower operations and their downstream environmental impact. Mr. Franco.

MR. FRANCO: Good morning, Commissioners. My name is Guido Franco. I am a Senior Engineer in the Public Interest Energy Research Program working on climate change issues. Today, I am here to ask for your approval for an interagency agreement with UC Davis to conduct a study that could influence future renewables of licenses for hydropower units in California that are going before the Federal Energy Regulatory Commission, or FERC.

About 150 units will be relicensed in the next 10 years, these licenses will have a lifetime of up to 50 years, so using historical hydrological conditions may not be the best thing to do, taking into account that our climate is changing already and the rate of change will accelerate in the next few years. However, so far, the Energy Regulatory Commission has not considered climate change in the relicensing of hydropower units, arguing that there is not enough scientific information for those

evaluations. So, what scientists from UC Davis will do is to use the detailed climate scenarios that your PIER Program has produced and enhance and implement a water system model called the WEAP Model to investigate how a specific project, the Yuba Redeveloping Project, takes about 362 megawatts, in what will be the hydropower implication and the ecological implications of different water management practices, taking into account, again, climate change.

So, the final goal is to publish the research results in a scientific journal, to demonstrate that environmental evaluations are feasible, scientifically credible, and that they should inform the relicensing process that the FERC is conducting. So, with that, I am ready to answer any questions that you may have.

CHAIRMAN DOUGLAS: Thank you, Mr. Franco. Questions, Commissioners?

VICE CHAIR BOYD: Actually, not a question, again, as Commissioner Byron has indicated, you are surrounded by the Research Committee, Commissioner Byron and myself, who obviously reviewed and vetted and recommended this come before the Commission today. But I will point out, based on past experience that goes back a number of years, to my ten years as Deputy

Secretary of the Resources Agency when I started a group called the Hydro Working Group of Federal and State agencies to begin to address the FERC relicensing of so many of the hydro facilities in California that will be coming up, and continue to be coming up for re-licensure which, as indicated by Mr. Franco, is a long period of time – 50 years – to begin to take into account more and more of the environmental and ecologic issues that should be considered in said relicensing, and FERC has not been the greatest in the past at doing that. And now, of course, with climate change as the greatest driver of all, it drives entire systems of considerations, and this will be a valuable pilot project, a laboratory study, so to speak, with a real time laboratory of what should become the standard approach to evaluation of these projects as the licenses come up. So, I'm glad to support and would move for approval of this item.

COMMISSIONER BYRON: Madam Chair, without comment, without question, but with my full support, I'll second the item.

CHAIRMAN DOUGLAS: All in favor?

(Ayes.)

The item is approved. Thank you, Mr.

Franco.

Item 7. City Of Turlock. Possible approval of Agreement 001-10-ECC for a loan of $766,165 to the City of Turlock to upgrade the city's streetlights from sodium vapor and mercury vapor to induction lighting. Ms. Fisher.

MS. FISHER: Good morning, Commissioners. My name is Anne Fisher with the Special Projects Office. The City of Turlock is requesting a $766,165 loan to retrofit approximately 2,075 sodium vapor and mercury vapor street lights with induction lighting. The upgrade will reduce the City’s energy use by an estimated 950,000 kilowatt hours annually, which represents a greenhouse gas emission reduction equivalent of 330 tons of CO_2 annually. This will save the city approximately $110,900 in annual energy costs. The ECCA loan will cover the total project cost. The simple payment on the loan, based on the annual savings, is 6.9 years.

CHAIRMAN DOUGLAS: Thank you, Ms. Fisher. And obviously, the ECCA Program has gotten a lot of exposure this year with the ECCA and the ECCA-ARRA loans that have gone out through this program. So, I guess I’ll just ask, are there other applications queued up, as well, behind this one, in terms of being

able to issue more loans?

MS. FISHER: Currently, we have three more loans that are under review and pending approval. Out of the $25 million that was allocated to the program, over $23 million has previously been approved and the amount of funds remaining, assuming that all the applications have been funded, is $282,000. So, we've used up almost all the funds.

CHAIRMAN DOUGLAS: Well, that's great. The money is out doing good work. Commissioners, any other questions or comments?

COMMISSIONER BYRON: A quick comment, Madam Chair. I met yesterday – another issue with Senator Canella, a new Senator from this District, and he talked about jobs. We know the cities, the counties, are certainly cash strapped, and what is not to like about a loan that provides savings of over $100,000 a year with a less than seven year payback? I'll plan to send him an e-mail letting him know I enjoyed meeting him and here's another example of the kinds of things the Energy Commission does. I move the item for approval.

VICE CHAIR BOYD: Second.

CHAIRMAN DOUGLAS: All in favor?

(Ayes.)

The item is approved. Thank you, Ms. Fisher.

Item 8. Trustees of the California State University. Possible approval of three grant applications, totaling $284,463 from the Public Interest Energy Research (PIER) Program's Energy Innovations Small Grant's Solicitation 09-01G through Pier Natural Gas funding. Mr. McCarthy, I would like to ask you to briefly describe Item 8A, B and C so that we can take them up together.

MR. MCCARTHY: Good afternoon, Commissioners – or, rather, good morning, Commissioners. I'm Patrick McCarthy, Contract Manager with the Energy Innovation Small Grant Program. On behalf of the program, I would like to recommend for funding the highest ranking projects resulting from Natural Gas Research Solicitation 09-01G. This Solicitation had received nine applications for consideration, four passed the initial screening, the same four met the minimum score in technical review, and three are being recommended by the Program Technical Review Board, totaling $284,463. The three projects are as follows: Item 8A, Residential Gas-Fired Heat Pump Water Heater, research will be conducted by Stone Mountain Technologies, they are requesting $94,463. This

project intends to determine the feasibility of a natural gas-fired heat pump water heater, using standard residential water heater footprint. The application plans to design and build a prototype that will be a direct replacement for conventional units and achieves almost twice the efficiency and, at the same time, will be priced competitively.

Item 8B, Advanced Control Techniques and Sensors for Natural Gas Engines, this research will be conducted by Colorado State University. They are requesting $95,000. The goal of this project is to design a control system for industrial natural gas engines that uses direct emission sensor output to determine precise error and fuel inputs. The intent of this technology is to reduce emissions and operating costs by increasing the automation accuracy and simplicity of the system. This project has matched funding and support from San Diego-based Continental Controls Corporation.

Item 8C, Natural Gas Combustion using Turbulent Jet Ignition, this research will be conducted by MAHLE Powertrain LLC, and they are requesting $95,000. The goals of this project are to resurrect turbulent jet ignition systems technology through modern precision manufacturing and advance

control techniques, and develop it as a direct replacement to the spark plug and vehicle-based natural gas engines. This project has the potential to achieve diesel-like thermal efficiency while reducing emissions by up to 80 percent. If there are any questions on any of these projects, I'd like to take them at this time.

CHAIRMAN DOUGLAS: Thank you, Mr. McCarthy. As always, these are really impressive projects and descriptions. Commissioners from the R&D Committee?

COMMISSIONER BYRON: Madam Chair, I think you know we are very keen on these Innovation Small Grant Solicitations. If Commissioner Boyd doesn't say it, I will, we note that these are all out-of-state grants, and I have to say, we're acutely aware of the Legislature's preference for doing in-State grants, and making sure that these funds stay in California, and I believe we make every effort to do that. But having worked in research for over 10 years myself, I think the principle that you always pursue the best available technologies and make them your own is the preferred approach. The potential savings here are enormous and these kind of technologies are the kind of technologies that we want to develop. Of course, we would love to see them manufactured and produced in

California, but certainly sold in California would be good, as well. So, I guess I just want to state the obvious, we note where these are all located, but I also recommend these projects to this Commission for approval and I would move Item 8 – I'm sorry, all three items on 8.

VICE CHAIR BOYD: I will offer a second to that motion and just note that the use of natural gas as a fuel for transportation or just in internal combustion engines, while just a few short years back was envisioned as somewhat of a prehistoric relic to be replaced immediately by other alternatives, I think we've all seen, and some of us in this commission, in particular in its IEPR, recognized that natural gas was going to play a significant role as part of the bridge to a cleaner fuel future, as natural gas is the cleanest of the fossil fuels, it provides stepping stones to some other future, and the fact that these technologies would therefore be employed in California, to the benefit of the California and Californians, it led to the conclusions of your research committee that these would be very valuable were they to prove to be successful in their development. And these, and others we will consider shortly, are examples of what a maximum $95,000 small

grant has the potential to do, to grow into major activities that benefit all of us for a very small investment. So, again, we wish these projects well, and I will second, as I say, the motion to approve.

CHAIRMAN DOUGLAS: Thank you. Commissioners, we have a motion and a second. All in favor?

(Ayes.)

The item is approved. Thank you, Mr. McCarthy.

Item 9. Trustees of the California State University. Possible approval of four grant applications, totaling $379,651 from the Public Interest Energy Research (PIER) program's Energy Innovations Small Grant's Solicitation 10-01. And, Mr. McCarthy, as before, if you could please describe Items 9A, B, C, and D for us?

MR. MCCARTHY: Yes, Madam Chair. I would like to recommend for funding the highest ranking projects resulting from Electricity Research Solicitation 10-01. This solicitation yielded the following response: 61 applications received, 21 passed initial screening in advanced technical review, 14 exceeded the minimum score, and went on to the Program Technical Review Board, where four proposals

are being recommended for funding, totaling $379,651. Item 9A is titled Flameless Combustion in Air-Cooled Hybrid Central Receivers. The research will be conducted by San Diego State University; they are requesting $94,940. The goal of this project is to develop a central receiver for concentrated solar thermal applications, with the ability to use flameless combustion of natural gas to firm up intermittency during periods of reduced solar input. This receiver will be used to power a Braden gas turbine, as opposed to the traditional steam cycle system, which should increase overall system efficiency while drastically reducing water resource requirements.

Item 9B, Development of Flexible Dye Sensitized Solar Cells, this research will be conducted by Miami University. They are requesting $94,931. This proposal seeks to develop the two technologies as improvements to Dye Sensitized Solar Cells and inorganic semiconductor to replace the organic liquid electrolyte, as well as a flexible transparent paper to replace the glass encasement. These advancements will enable highly efficient manufacturing processes similar to those developed for in-film cells.

Item 9C, Fabrication of Doped Nanowires for High-Temperature Thermoelectric Materials, this research will be conducted by NanoIRS, they are requesting $94,780. This project will determine the feasibility of developing an innovative thermal electric material, using nanotechnology and doping techniques. This research will investigate the ideal size, molecular geometry, and compound additives to increase heat conversion efficiency. One target application of proposed research is as an active heat sink to extract electrical energy from the waste heat of concentrated PV cells.

Item 9D, High Efficiency LED-based Linear Fluorescent Replacement Lamp. This research will be conducted by a Rensselar Polytechnic Institute Sliding Research Center. They are requesting $95,000. This project seeks to develop an LED replacement for T8 four foot fluorescent lamps, more efficient, longer lasting and free of toxic substances. This linear LED replacement lamp will use the Lighting Research Center's scattered photon extraction technology to far exceed the efficacy light output and performance currently available in linear LED lamps.

CHAIRMAN DOUGLAS: Thank you. Again, all sound like very impressive projects. It's always nice

when LED technology can replace an existing fixture; it reduces cost quite a lot, obviously, in the last project. Commissioners, additional comments, questions on these items?

VICE CHAIR BOYD: I have a question about 9C and/or a comment and a question. Perhaps Mr. McCarthy could take just half a moment to explain doping techniques lest people in the audience walk away with the wrong impression.

CHAIRMAN DOUGLAS: Dope nanowires?

MR. MCCARTHY: In this instance, doping is just the term used to describe small amounts of additives of substances other than the core substance to alter the properties of the material.

VICE CHAIR BOYD: Sounds like – never mind. Thank you very much.

CHAIRMAN DOUGLAS: Thank you for that question, Commissioner Boyd. I don’t want anyone to get the wrong idea about the doped nanowires. Other questions or comments?

COMMISSIONER BYRON: Mr. McCarthy, actually, I think I’ll direct my comments towards the Commissioners. I know you’ve heard me say this before, I’ve had the benefit of participating in – I shouldn’t say “participating,” watching the selection

process that takes place. I have a tremendous regard for the folks that Alan Sweedler and David Rohy, who manage this program on our behalf, gather and review these projects. I note that you had indicated there were 61 received for this solicitation, and only four yielded recommendation and approval. And, of course, Commissioners don't interfere in that selection process. I think it's very good, it's well done, it has a lot of good technical expertise in the room. But, I would think we'd be willing to take some more risks; it takes a great deal of effort and time and money to gather these folks, so, Mr. McCarthy, to the extent you can influence that process, I would think we'd want to take some more risks. I've watched evaluations of proposals; it's not an exact science. I participate in the Clean Tech Open and they pick winners before the companies really are companies, based upon what they know. And you just don't know where the winners are going to come from, so I'd be inclined to take more risks. Commissioners, that would be my recommendation going forward for the Innovation Small Grant Program. Having said that, I like these, I think they are appropriate and in line with what we're trying to accomplish, and I would recommend approval of this item.

VICE CHAIR BOYD: A question if I might. Commissioner Byron, by taking more risks, do you mean perhaps drill down a little deeper and bring a few more projects before us, since we had so many that did qualify?

COMMISSIONER BYRON: Right, and I wouldn't question how they do their evaluations, but I know that, once they limit the Received, Passed, and I forget the third category, then they kind of look where they're going to draw the line in terms of what you've recommended. I'm suggesting draw the line a little further up, and take some more risk on projects that may not seem to be fully baked. Mr. McCarthy, did you want to add something?

MR. MCCARTHY: I was just going to add, Commissioner, that the next program Technical Review Board is tomorrow and I will be taking those comments to heart and with me to San Diego.

VICE CHAIR BOYD: I will second your motion, Commissioner Byron, for approval.

CHAIRMAN DOUGLAS: All right, we have a motion and a second. And, Commissioner Byron, you can clarify that the motion included Items 9A through D?

COMMISSIONER BYRON: Correct.

CHAIRMAN DOUGLAS: All right. All in favor?

(Ayes.)

The item is approved.

And now, Item 10. Trustees of the California State University. Possible approval of a grant application for $92,995 from the Public Interest Energy Research (PIER) program's Energy Innovations Small Grant's Solicitation 10-01G. And I guess we're just taking up Item 10A. Mr. McCarthy.

MR. MCCARTHY: Yes, I would like to recommend for funding the highest ranking project resulting from Natural Gas Research Solicitation 10-01G. This solicitation had eight applications; five passed the initial screening, the initial technical review, and advanced to the Program Technical Review Board. One project is being recommended for funding totaling $92,995. The project is titled "Development of Energy Efficient Dehulling and Drying Methods for Walnuts. This research will be conducted by UC Davis, and this project seeks to increase the efficiency of walnut harvest and drying processes. The primary effort is to develop an inexpensive and easily adoptable method for sorting nuts by moisture content to significantly reduce the natural gas required to dry them. This project will also investigate dehulling and drying technology advancements.

CHAIRMAN DOUGLAS: Thank you, Mr. McCarthy. Questions, Commissioners?

VICE CHAIR BOYD: Well, a comment. I would just note in the write-up, and I will note for the record, that California is the largest U.S. producer of walnuts, so it's pretty obvious why we would be interested in this and I note that the California Walnut Board is a supporter of this project, as well. I will move its approval.

COMMISSIONER BYRON: I will second.

CHAIRMAN DOUGLAS: All in favor?

(Ayes.)

This item is approved. Thank you, Mr. McCarthy, many items for us today.

MR. MCCARTHY: Thank you, Commissioners.

CHAIRMAN DOUGLAS: Item 11. Electric Transmission-Related Data Requests. Possible adoption of Forms and Instructions for Submitting Electric Transmission-related Data. Mr. Hesters.

MR. HESTERS: Good morning, Commissioners. My name is Mark Hesters and up for consideration today is the adoption of the Forms and Instructions for Electric Transmission-Related Data. Data received in response to these forms will be used in the development of the 2011 Strategic Transmission

Investment Plan and the 2011 Integrated Energy Policy Report. This is the third edition of standalone transmission forms; previously, we had folded transmission requests into what are now called the Forms and Instructions for Submitting Electricity Resource Plans. Sort of a little background on these – our staff draft forms were posted on November 10th, 2010, we then held a workshop on November 30th, 2010, and requested written comments from stakeholders by December 14th, 2010. We did not receive any comments at either the workshop or in writing that resulted in changes to our draft forms and instructions. If these forms are adopted, they would require electric transmission system owners in California to submit responses by March 18th, 2011.

CHAIRMAN DOUGLAS: Thank you, Mr. Hesters. Commissioners?

COMMISSIONER BYRON: Madam Chair, we've been reviewing this in the – correct me if I'm wrong – this is the Transmission Planning, or Electricity and Natural Gas?

MR. HESTERS: It's the Transmission and Regional Planning Committee.

COMMISSIONER BYRON: Okay, and let me note the staff is once again up against the wall in terms

of meeting this date in a timely manner such that they can conduct their analysis for the IEPR for 2011, so I would recommend we hurry and approve this so they get it out.

CHAIRMAN DOUGLAS: Thank you, Commissioner Byron. Indeed, we will, I believe, hurry and approve this. Now, Commissioner Boyd, comments or questions?

VICE CHAIR BOYD: No comments, no questions. I am prepared to second Commissioner Byron's motion.

CHAIRMAN DOUGLAS: Was that a motion, Commissioner Byron?

COMMISSIONER BYRON: Yes.

CHAIRMAN DOUGLAS: All right, we have a motion and a second. All in favor?

(Ayes.)

This item has been approved.

MR. HESTERS: Thank you.

CHAIRMAN DOUGLAS: Thank you.

Item 12. 2010 Integrated Energy Policy Report Update. Possible adoption of the 2010 Integrated Energy Policy Report Update. Ms. Korosec.

MS. KOROSEC: Good morning, Commissioners. I'm Suzanne Korosec. I manage the Integrated Energy Policy Report Unit here at the Commission, and the item before you today, as you said, is adoption of the

Committee Final 2010 Integrated Energy Policy Report Update. Public Resources Code requires the Energy Commission to prepare an IEPR every two years, in odd number of years, that assesses energy supply and demand, energy production, delivery, and distribution, any market trends, and major energy challenges that are facing the State. The Energy Commission is also required to prepare an update to the IEPR, in even numbered years, that addresses any new issues that may have arisen since publication of the prior IEPR. Our first IEPR was published in 2003 and, with the adoption of the report today, we will complete our fourth two-year cycle.

The IEPR Committee chose to focus the 2010 IEPR Update on the potential benefits that energy-related Federal Stimulus funding from the American Recovery and Reinvestment Act will have on California's energy sectors. Of the $787 billion that were available nationwide through ARRA, the Federal Government allocated $36.7 Billion, about five percent, for energy, which included increasing energy efficiency, promoting renewables, developing alternative transportation fuels and vehicles, modernizing the electricity grid, reducing greenhouse gas emissions, and furthering research and innovation

in new technologies.

As of December 2010, when this final committee report was published, California had been awarded about $5 billion of that $36.7 billion in three specific areas. First, there were formula grants with funds that were awarded to California based on the state's population. The Energy Commission directly is administering $314.5 million of those funds through four programs, the State Energy Program, the Energy Efficiency and Conservation Block Grant Program, the State Appliance Rebate Program, and the State Energy Assurance Initiative. These programs include what we call First Strike Programs which are intended to get funding out the door quickly, using existing mechanisms to provide immediate benefits. These are combined with new and innovative programs that are designed to deliver longer term and sustainable benefits for jobs, economic growth, energy reduction, and greenhouse gas reduction benefits. All of these programs were designed to overcome barriers to clean energy development in California by reducing costs, providing financing mechanisms, increasing consumer awareness of the benefits of these technologies, providing quality assurance, and providing a well-trained workforce that could

implement these programs at the scale needed to achieve California's energy goals.

Second, California was awarded more than $1.4 billion of ARRA funding through competitive Federal solicitations, and the Energy Commission was involved in this aspect of the ARRA funding by providing cost-share funds through two of our existing programs, the Public Interest Energy Research Program, and the Alternative and Renewable Fuel and Vehicle Program, to help California companies be successful in those Federal solicitations. $57 million from these programs helped leverage more than $600 million in ARRA funding for California projects, along with more than a billion dollars in new private investments.

The third category of ARRA funding is tax credits and loan guarantees for clean energy efforts like energy efficiency in existing buildings, new renewable power plants, and clean energy manufacturing. The Energy Commission's connection to these awards was through its power plant licensing authority, over nine renewable power plants that needed to meet Federal deadlines in order to qualify for ARRA funding. As you're well aware, the Commission worked very closely with other State and Federal agencies to expedite the permitting of these

projects to meet those deadlines, while still ensuring the most intense level of environmental review.

The 2010 IEPR Update outlines the main priorities that the Energy Commission used in awarding its formula-based funding to energy projects, and describes how those projects and programs meet those priorities. We focused on job creation and economic benefits, providing lasting and measurable energy benefits, spending money efficiently and with maximum accountability, contributing to the State's energy and environmental policy goals and, finally, the degree to which projects and programs leveraged other funding sources through partnerships.

The report also summarizes anticipated benefits to the State from ARRA funding awarded through the Energy Commission. This includes creation or retention of more than 6,000 jobs, leveraging more than $600 million of additional public and private investment, training more than 9,000 workers for the clean energy economy, expanding in-state manufacturing, creating revolving loans that will re-use the ARRA funding to support new projects that will continue to provide benefits, reducing greenhouse gas emissions from the production and use of energy, and contributing towards our statewide goals for energy

efficiency and the use of renewables.

Benefits from the cost-share funding that the Energy Commission is providing include accelerating building to Smart Grid in California, which was going to help us reduce peak energy demand, help integrate renewable technologies, and increase grid reliability, and also building the electric vehicle infrastructure that is going to be needed to support these anticipated roll-outs of electric vehicles by auto manufacturers over the next decade, which in turn will help California reduce its reliance on Petroleum fuels.

And finally, the renewable power plants that were licensed by the Energy Commission are expected to provide more than 10,000 temporary construction jobs, 1,400 full time plant operation jobs, hundreds of thousands of dollars in property and sales tax revenues, and also will make a significant contribution towards meeting our renewable energy goals in the state. So, the report concludes that ARRA is going to help transform California's energy sectors by speeding up the achievement of our energy goals, it will also help us build on our well established leadership in clean energy by increasing funding for clean energy projects, manufacturing, and

research, it will help the economy by providing jobs throughout the state, including regions with the highest unemployment rates, along with the skilled training for the workers that will be needed to fill those jobs. And it will provide lasting benefits through revolving loans, funding programs for comprehensive energy efficiency retrofits, and making major improvements to the state's transmission and alternative fuel and vehicle infrastructures.

So, with that, I would ask for your approval of the 2010 IEPR Update, and I would be happy to answer any questions before we take public comments on the report.

CHAIRMAN DOUGLAS: Thank you, Ms, Korosec, and thank you for that brief but thorough presentation of the 2010 IEPR Update. I just wanted to briefly remind my fellow Commissioners and Energy Commission staff here, in particular, that last year was such a very busy year for the Energy Commission that the Governor's Office and others were even suggesting that we consider not doing an IEPR Update at all, and what we chose to do instead was focus the IEPR Update on the Federal policies, the Stimulus Act, that had added so much to our workload, but, really, because it was such an unprecedented opportunity for us to grab and

run with, and try to make transformational decisions and investments and set up policies and programs that we hope will last well beyond the Stimulus Act, so this was our effort to write down before we got busy and forgot, or moved on from this effort, to write it down, to know what was done, and to be able to show the public what was done, what we hoped to achieve, and to have something against which to measure the results of programs as they moved forward. So, I want to thank Ms. Korosec and her team for the Herculean task of writing all of this down and, in particular, the IEPR team has the job that never ends because – I know, I have a meeting with them later today about the 2011 IEPR, Commissioner Byron, as well. So, it truly is the job that just keeps on chugging along, and we have milestones such as approvals of one report, but we're always deep into the next when that happens. So, anyway, I thank the IEPR team, and I would ask my fellow Commissioners what questions or what comments they would like to make. Commissioner Byron.

COMMISSIONER BYRON: Thank you, Madam Chair. You know, I have to say, I am extremely proud to have been associated with this Commission and all of its accomplishments over the past year. Congratulations to the staff. I think it has been an extraordinary

effort, they've achieved a great deal this past year, funding efficiency projects, creating jobs, permitting renewable plants, and this report does an excellent job of chronicling that. However, the IEPR is a very powerful document, we haven't really fully utilized the power of it on this Update, there are many who rely upon this Commission to evaluate and publicly vet energy policy recommendations, and this report this year does not really do that. That does not diminish the value of the report in any way, but all of those out there, Legislators, the Governor, and others who read and value the work of this Commission, we're not taking a pass in 2011. Staff, get back to work on vetting those important recommendations that your government depends upon, and providing the path towards achieving the State's energy policy goals in 2011.

CHAIRMAN DOUGLAS: I think that's a good point. In 2011, you know, we have a Scoping Order out, we're looking at revising that Scoping Order, and honing in the focus of the IEPR, looking at the Governor's Clean Energy Jobs Plan, looking at Distributed Generation and how can we really move forward much more rapidly than the status quo has been on distributed generation, what are the barriers to

that, how do we really move forward? So, as Commissioner Byron knows well, we are deep into thinking about how to make the 2011 IEPR really take on some of the tough energy issues in the State of California right now. The AB 1318 and priority reserve issues in South Coast and how we move forward, and what really are the new generation reliability needs there, and that's a workshop that is actually scheduled. So, there is certainly a lot of energy policy work, this IEPR has been in some ways – the IEPR Update of 2010 – has been narrower than past takes, and that's not necessarily a bad thing either in the sense of being able to go deep into one subject, which is what we did there. So, I will ask Commissioner Boyd if you have any comments or questions on this document.

VICE CHAIR BOYD: I have a couple comments, then I know we have public testimony and I'll hold back a couple of additional comments until we've finished that. But I would say that, Ms. Korosec indicated that the statute requires that we do this report, and I just note that we delight in this responsibility, this is a unique document that really is in effect in the odd years of the main report, the Energy Plan for California. We struggle to make more

policy and decision makers outside of this agency pay attention to that fact, and we get better with each successive year, and I hope we're able to impress Legislators, new and old, and the new Administration, with the need to focus on what is in the IEPR. As you indicated, we were overwhelmed as an agency by the recession and the economic stimulus activities. I think it totally appropriate to have written a report about it in light of the fact there was pressure to produce no report in deference to the other incredible workload that had descended upon the agency on the siting of renewable facilities and this program. This report doesn't end that responsibility, having passed out all this money, as you all know, we now retain a long term responsibility to monitor, evaluate, and report on all the projects that were funded, which is going to impact this agency with a workload that is not sufficiently funded, like everything else. So, it is going to eat into our ability to do some of what people expect us to do. Therefore, I think the 2011 IEPR will take on an even greater importance. And I am quite aware of the meeting you're having today since we can't get three Commissioners together on such a meeting, you will be hearing from my staff at length on some of the items and modifications to some

of our thinking, as I've discussed with you in the Fuels and Transportation area just the other day, and there are a few other areas where we have commitments based on legislation, and commitments made to active State Legislators who think fondly of this agency to report on certain subjects.

Lastly, I'll just say that, while it is a report on the Economic Stimulus activity, the staff and Ms. Korosec and the Committee are to be commended by liberally sprinkling throughout the report references to other goals and objectives of this agency and of the state as it relates to all forms of energy and energy use, and some side bar references to some of the positive attributes of the PIER Program, all of which will be valuable, we've indicated before, in the following months as we deal with the Legislature over the value of the California Public Goods Charge Program and all of its components, only one of which was the Research Program. So, with that, my compliments to the staff. My encouragement to the staff for yet another year, it is a perpetual motion machine, and a good one at that. I think it's one of the best pieces of legislation that came out of the electricity crisis that befuddled California almost a decade ago now. 'Nuff said.

CHAIRMAN DOUGLAS: 'Nuff said. Do we have a motion on the 2010 – oh, I'm sorry, Commissioner Boyd, you keep reminding me and I don't have a card, but is there anyone in the room who would like to speak on this item? Is there anybody on the phone who would like to speak on this item? Anyone that would like to speak, but not on this item? We've got public comment later on the agenda for more general comments.

VICE CHAIR BOYD: Well, it may be on future items, so I guess we have no public comment.

CHAIRMAN DOUGLAS: We have no public comment on this item. Do we have a motion on this item?

COMMISSIONER BYRON: Madam Chair, I would move approval of – I'm losing track of the numbers here – Item 12, be it the 2010 Integrated Energy Policy Report Update, with the reminder on behalf of the IEPR team that it is the longstanding tradition that the Chair of the Committee takes them out to lunch.

VICE CHAIR BOYD: That's true.

CHAIRMAN DOUGLAS: That is probably totally justified, as well. Is there a second?

VICE CHAIR BOYD: Second.

CHAIRMAN DOUGLAS: All in favor?

(Ayes.)

The item is approved, the 2010 IEPR Update is approved. Thank you, Ms. Korosec.

MS. KOROSEC: Thank you.

CHAIRMAN DOUGLAS: We're going to skip the Minutes, we do not have a quorum on the Minutes. So, Item 14. Commission Committee Presentations and Discussion. Is there any presentations or discussion at this time, Commissioners?

VICE CHAIR BOYD: I would just quickly note that the Climate Action Team Report to the past Governor was completed and issued in December and presented to Governor Schwarzenegger as, I guess, a last action of the still standing, I assume, Climate Action Team. This agency did a lot of work on components of that report, and I just want to thank the staff for the work they did there. While other agencies get a lot of notoriety, this agency – you can't say climate change without saying the word "energy" almost in the same sentence, and guess where that energy expertise comes from? The various energy agencies, of which we are a prime player. And there is a prominent chapter in here on research, which this agency is solely responsible for producing, not only do we do the research, but we chair the Climate Action teams, the Research Committee, and pull all the

agencies together to report on climate research in California, and make suggestions for the future. So, this final report is available for folks who are interested in the subject, and while we may do things differently under a new Administration and because of the severe financial crisis, the program and the issue are not going away, and I'm sure we as an agency are continuing to do our work on the Climate Action team; whether it is continued in the future remains to be seen at the present time – a little higher priorities like finding the missing $28 billion, but so on and so forth, so that is my only comment today.

CHAIRMAN DOUGLAS: Thank you, Commissioner Boyd. Item 15. Chief Counsel's Report.

MR. BLEES: Thank you, Commissioners. Continuing the themes of being proud and the perpetual motion machines, right before the New Year's weekend, there were two challenges filed to the Commission's approval of the Calico Solar Power Plant. These were filed by two well established entities who had participated vigorously in the Commission's licensing proceeding, the Sierra Club, and California Unions for Reliable Energy. Challenges to the Commission's power plant – power facility licensing decisions are filed directly in the California Supreme Court, and the

Commission must reply to such challenges within 10 days after their filing. So, I want to thank, both personally, and on behalf of our Chief Counsel, the many people in the Chief Counsel's Office, both attorneys and our support staff, too long a list to mention all their names here; also, people outside of our office, including Roy Sanders in Business Services, Paul Kramer and Maggie Reed in the Hearing Advisor's Office, and probably – and I wouldn't be surprised if there are some people that I've even unaware of. This huge team took on the daunting task of replying, as I said, within 10 days, to two petitions, both of which raised a large number of complicated issues, and I think that we were able to send everybody home by 3:00 a.m. on the day of filing, as opposed to our work hog all nighters, but despite that little bit of slacking off, I want to again – both Michael and I want to publicly thank all of our colleagues and express what a privilege it is to work with such a dedicated, skilled group of people, and not least of which, a group of people who are a bunch of outstanding human beings, who are really fun to work with, as well as professionally very sound. So, thank you for the opportunity to do that.

CHAIRMAN DOUGLAS: Well, thank you, Mr.

Blees, and very well said. It’s unfortunate that our legal team had to endure not only one, but two all nighters, or virtual all nighters, and those all nighters coming along with working all weekend, by the way, which Mr. Blees didn’t mention, but didn’t the all nighter occur – was it Sunday night or –

MR. BLEES: Yeah, virtually the entire team worked more than full time through the New Year’s weekend, and then this past weekend, and it was virtually around the clock, and 3:00 a.m. was, you know, Sunday night/Monday morning.

CHAIRMAN DOUGLAS: It’s a little detail, but it’s a big deal. So, thank you and thanks to your team and support staff, and everyone else who pitched in on this incredible work.

VICE CHAIR BOYD: Here here. And I would ask, Mr. Blees, you don’t intend to go skiing, do you?

MR. BLEES: As I said, we’re a perpetual motion team.

VICE CHAIR BOYD: The reason I asked that silly question is because our Chief Counsel, of course, is home mending from a horrendous broken leg he suffered skiing and before all this workload hit, and I know he did his fair share from afar, but Commission Byron insisted on seeing the x-rays,

sharing them with us, and it was rather bizarre, to say the least, pretty – he'll never get through an airport security –

CHAIRMAN DOUGLAS: I was wondering that, too, as I looked at that picture.

MR. BLEES: Mr. Levy was – dragged himself and his state-of-the-art, cutting-edge technology knee brace into the office several times, and he was – probably against his doctor's orders, and definitely against his wife's orders, he was one of the people who was here until 3:00.

CHAIRMAN DOUGLAS: That's incredible.

VICE CHAIR BOYD: Kudos to all of you and all the staff who have done this, it has been a tough end of the year for us in terms of legal actions, and I note that the Plaintiffs in this case took every advantage of the timing to put you at the most disadvantage in terms of your opportunities to deal with the subject, thus the all nighters and the weekends, and what have you. So, again, kudos to the dedication and loyalty of all those people who worked through the holiday weekend on this issue. And let's hope your track record in the Supreme Court is sustained as a result thereof.

CHAIRMAN DOUGLAS: Thank you, Commissioners.

Item 16. Executive Director's Report.

MS. JONES: I have a brief report. Since this is acknowledgement day, I did want to acknowledge the staff for the tremendous efforts that they undertook on this last year in 2010 in licensing the nine renewable plants and in encumbering and moving almost $320 million in ARRA funds, while at the same time continuing work on our historic programs on PIER, Alternative Fuels and Transportation Technology, and Renewables Development and Energy Efficiency. I'd like to thank the Commissioners on behalf of the staff for their support and patience during this period of extremely high workload, and we ask for your continued support and patience in facing a very high workload again in 2011.

CHAIRMAN DOUGLAS: Well, thank you, Ms. Jones, and we're all digging in and certainly there is a lot of work to do, and always has been.

VICE CHAIR BOYD: Well put. Last year was a year I hope we do not repeat ever again and, as a veteran of over 40 years in Government, this place did amazing things last year in terms of the loyalty and dedication of the staff to the mission of the Agency, in the face of a lot of adverse publicity about some of our programs, general assaults on government

employees, in general. And through some, you know, reductions in pay and furlough days, of which many people worked anyway, etc. etc. So, while it's an enviable and proud record, let's hope you don't have to repeat it in 2011.

MS. JONES: Aye aye.

CHAIRMAN DOUGLAS: Absolutely. Item 17. All right, Public Advisor's Report. I think this is an opportunity, if it wasn't done the last Business Meeting when I was away, to welcome Lynn Sadler to the Energy Commission as – let me make sure I get this right – Deputy Public Advisor? Assistant Public Advisor. Is there any Public Advisor's Report today? None, all right. Well, welcome, Ms. Sadler.

VICE CHAIR BOYD: We were able to welcome her at our last meeting, as well, so thank you for the added.

CHAIRMAN DOUGLAS: The added welcome, the second welcome, it's really great to have her on board and look forward to working with her.

Item 18. Is there any public comment?

VICE CHAIR BOYD: There is.

CHAIRMAN DOUGLAS: Please come forward.

MS. BECKER: Thank you for allowing us to speak today. We have several issues that we would

like to begin with, my name, again, is Rochelle Becker, and I'm the Executive Director of the Alliance for Nuclear Responsibility. I would like to discuss the seismic issues and the nuclear plants that still have not been completed, even though the Commission has recommended that they complete these studies. Last month, Edison held a hearing with the – Southern California Edison held a hearing with the Nuclear Regulatory Commission to discuss its fifth straight year of problems with human performance and failure to follow instructions at the plant. Among the items that were discussed that evening was also the seismic studies for the AB 1632 criteria that were given to Edison and to PG&E, and someone happened to tape the evening. I was at an NRC meeting, but in San Luis Obispo that evening, so it's hard to be at two different locations at the same time; but I did review the tape and Edison is saying that they are nearly complete with the AB 1632 recommendations from this Commission. And we are finding it a little hard to believe that they could be nearly complete with recommendations in which the parameters haven't been set yet for the studies that they need to do. They do not have an in-house seismologist, they have hired PG&E's seismologist to help them down there. It is –

they do not intend to do the same studies, it is becoming more and more obvious, and they will not be working with the USGS, evidently there is a Southern California seismic group that they work with, rather than the USGS. So, it is our request that the 2011 IEPR include follow-up from the 2009 IEPR of the items that are not being adhered to as this Commission expressed the utilities to do so.

The other one is PG&E. We do know that the Public Utilities Commission did grant funding for the seismic studies in August, however, they didn't provide any funding for the Review Panel when they passed on $16.something million to PG&E to do the seismic studies. PG&E now has $16 million of ratepayer money and no parameters for the study. We tried to rectify that in our filing of alternatives to the Settlement Agreement that is before the Public Utilities Commission, and the utility, PG&E, and the staff of the PUC, don't seem to think it's necessary that the utility finish the seismic studies of this Commission before they receive license renewal for funding from the ratepayers. The only stick that this state has, that we can see, is the funding from ratepayers. If they get the funding from the ratepayers and they finish the process, the license

renewal process, PG&E could have Diablo Canyon licensed for an additional 20 years sometime next year. The seismic studies will not be done in 2014. Some in this Commission, and certainly some in the State, and myself, realize that when we did the seismic studies second, rather than first, during the original construction and licensing of Diablo Canyon, the cost overruns ran to about $4.4 billion. In the State's economy today, in the public's economy today, ratepayers can't afford $4 billion in cost overruns. We learned this morning that, in Japan, at the TEPCO plant, the long "K" names, but the TEPCO plant in Japan that had the 2007 earthquake, they are going to be taking one of their reactors and shaking it, they are just going to build this huge shake thing and they are going to shake their reactor to actually see what happens in an earthquake. We think this is a great idea, we'd like to know what happens during an earthquake. They are about to do it. That information would be valuable. This Commission said that they should look at lessons learned from the TEPCO earthquake and what PG&E chose to do was to look at the first lesson learned, less than 90 days after the earthquake, and gear their report on lessons learned to only one report. There have been numerous

reports, lessons learned that are much much longer than that very first report, industry report that was done. If we are really serious about knowing whether or not we can operate these nuclear power plants 2025 and beyond, we need to know whether or not they are going to be safe to operate. We now know that there are two earthquake faults within three miles of that plant. We believe that an appropriate question to the Nuclear Regulatory Commission and the Department of Energy is, “Okay, how many earthquakes does it take?” When it was licensed, it had none, when we gave them a Certificate of Public Convenience, it had none, when it was licensed it had one, now we’re looking at license renewal and we know that there are two. We also are pretty certain there might be a few more from the seismologists that we’ve spoken to. And absent the seismic information, continuing to invest in license renewal is premature. We need this information and we need to also really look at the alternatives. PG&E’s only alternative for Diablo Canyon in its rate case filing is wind from Montana, and wind from Wyoming, and I know there’s wind in both of those states, but there’s not transmission bringing it to California in both of those states. And there is wind in California. We need to honestly look at

alternatives, not just, “Oh, here’s two examples of something that may or may not work, and we’ll figure it out later.” We did that in the past, it was called an “Energy fiasco.” And we can’t afford to do that in the future.

The last thing I’d like to ask the Commission to do is write a letter to the Blue Ribbon Commission of the Department of Energy. Yesterday, Congresswoman Capps, who represents San Luis Obispo area sent a letter to the Blue Ribbon Commission asking that they hold a hearing in California. They are discussing what to do with this on-site waste that we have and they’ve been holding hearings across the East Coast. They held one hearing in Hanford, but they have absolutely no hearings scheduled. We do have a member on the Blue Ribbon Commission, sort of low down, not on the top side of the names of people, but he is on the Commission, and that is Per Peterson, who sits on the Diablo Canyon Independent Safety Committee. So, I wrote Per last month and I said, “Do you think it’s possible for the Blue Ribbon Commission to come out here and talk about the radioactive waste that is being stored at very seismically active places such as Humboldt, Diablo Canyon, and we don’t know about San Onofre because they’re not looking really

well." And he forwarded on to the Blue Ribbon Commission, who sent me a letter saying, "Well, we don't have any plans, but that's not a bad idea," you know, "Thank you for all the work you do, and we'll keep you in mind." And so we contacted Congresswoman Capps yesterday, she sent a letter out to the Blue Ribbon Commission. We would like to see this Commission send letters of support for her request to hold hearings here in California. We do not want the hearings on-site, we would like the hearings to be held in Sacramento where the people who make the decisions on what we're going to do can hear what is going on, and no one has a travel budget, so we would rather make sure that we have to spend a little bit of money to get up here, rather than you have no money to get down there. Thank you.

CHAIRMAN DOUGLAS: Thank you. Commissioner Boyd.

VICE CHAIR BOYD: Well, thank you, Rochelle, for being here and continuing to bring these issues to our attention. I've had several years of excellent interface with Ms. Becker on the subject of nuclear energy in California, and she is a worthy spokesperson for those who have concern about the subject. I take to heart your concerns and your advice about what the

2011 IEPR should address, I gave a mild hint a little earlier that one of my recommendations to my fellow Commissioners is that, since the issue is still alive, and the recommendations we made in 2009, which were really a product of the seismic study legislation of then Assemblyman Blakeslee, and we have requests from and commitments to Senator Blakeslee to continue to keep this issue as a subject that would be addressed in the IEPR, which was almost a condition of the legislation that was passed on the subject. So, I'm pretty confident that there is a placeholder in the 2011 Integrated Energy Policy Report to continue discussions on the progress, or lack thereof, of various utilities in addressing the seismic issues that were brought up in the study done pursuant to that legislation and referenced in the previous IEPR. As you probably know, Barbara Byron, our one and only nuclear expert, who is retired and still working with us as a retired Annuitant, and I, spend a lot of time keeping up with these issues, we just had a meeting this week with Edison, we seem to have perpetual meetings with PG&E and we will continue that subject. We have had a lot of dialogue in the past year with the Nuclear Regulatory Commission on the subject of seismic activity which, as you know, was initially

rejected as an issue they would even consider and discuss, but they have had discussions and workshops, and what have you on the subject, not that they necessarily led to satisfactory resolution, but they added to the body of information on the subject. So, you have my assurance during my last year as a Commissioner that I will keep focused on this subject matter, and I'm sure the Commission will in its future. And we'll follow-up on some of the issues you've brought before us in our continuing dialogue not only with the utilities, but with the California Public Utilities Commission, and having them keep faith with the President's letter to PG&E about the expectations.

And lastly, the issue about the Blue Ribbon Committee and us writing to them, I'm sure the Chairwoman and I will talk about that, talk about your request, and see what we can do. So, thank you for your continued interest in the subject and your perseverance, quite frankly, on the subject.

CHAIRMAN DOUGLAS: Thank you. Thank you, Commissioner Boyd. You're right, you and I will talk about the question of the letter and, as it is your last year on this Commission, we are also going to have to assign a Commissioner to follow-up on the

nuclear issues and to take leadership of those issues once that year has elapsed, so once we have a full Commission of five again, we will talk about who that might be.

VICE CHAIR BOYD: We thought we had a Commissioner, but he is no longer a Commissioner. But we hope to see him back as a Commissioner.

CHAIRMAN DOUGLAS: We hope to see him back and, one way or the other, we will find somebody to assign to this. Commissioner Byron, anything? No. Well, thank you for being here. We always appreciate hearing from you. Thank you for your hard work.

MS. BECKER: Thank you.

CHAIRMAN DOUGLAS: Item 19. There is nothing here for Internal Organization and Policy, so we are adjourned.

(Whereupon, at 11:32 a.m., the business meeting was adjourned.)

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