

STATE OF CALIFORNIA
California Energy Commission

Minutes of the May 31, 2011, Energy Commission Business Meeting.

The meeting was called to order at 10:05 by Chair Robert B. Weisenmiller. The Pledge of Allegiance was lead by Chair Weisenmiller.

Present:

Robert B. Weisenmiller, Chair
James D. Boyd, Vice Chair

Karen Douglas, Commissioner
Carla J. Peterman, Commissioner

1. CONSENT CALENDAR. (Items on the Consent Calendar will be taken up and voted on as a group. A commissioner may request that an item be moved and discussed later in the meeting.)
 - a. The Regents of the University of California: Possible approval of Amendment 4 to agreement 500-02-004 with the Regents of the University of California, California Institute for Energy and Environment (CIEE) for no-cost time extensions to complete eight critical projects that require additional time. Contact: Mike Gravely.
 - 1) UC-MRA-026. Air Quality Research Project. Possible approval of Amendment 3 for a six-month no-cost time extension to complete the field program.
 - 2) UC-MRA-045. West Coast Regional Carbon Sequestration Partnership, Phase II. Possible approval of Amendment 3 for an eight-month no-cost time extension to update reports and complete the final deliverables due to delays.
 - 3) UC-MRA-70. Fault Analysis in Underground Cables. Possible Approval of Amendment 3 for a six-month no-cost time extension to complete field testing and documentation.
 - 4) UC-MRA-084. PIER State Partnership for Energy Efficiency Demonstrations. Possible approval of Amendment 2 for an 8-month no-cost time extension to allow time to benchmark, install and monitor the energy savings from the demonstration projects and enhance the quality of the results.
 - 5) UC-MRA-088. Strategic Analysis of Energy Storage Technology. Possible approval of Amendment 1 for a six-month no-cost time extension needed to complete the project due to delays.
 - 6) UC-MRA-089. Life Cycle Greenhouse Gas and Energy Analyses of Production of Algae Biofuels. Possible approval of Amendment 1 for a six-month no-cost time extension which is needed to complete the project due to delays.
 - 7) UC-MRA-090. Under-measured and Overlooked Fuel-Saving Opportunities in California's Light Duty Vehicles. Possible approval of Amendment 1 for a six-month no-cost time-extension which is needed to complete the project due to delays.
 - 8) UC-MRA-001. Administration. Possible approval of Amendment 4 for an eight-month no-cost time extension to complete the administration portion of the Master Research Agreement 500-02-004.

Commissioner Peterman recused herself and left the room prior to the vote on Item 1a due to a previous financial relationship with UCEI, a subsidiary of UC Berkeley.

Commissioner Douglas moved and Vice Chair Boyd seconded approval of Item 1a. The vote was unanimous. (3-0)

- b. WESTERN INTERSTATE ENERGY BOARD. Possible approval of Contract 150-10-005 for \$36,000 with Western Interstate Energy Board for two years' dues. (ERPA funding.) Contact: Clare Laufenberg.
- c. CITY OF TURLOCK. Possible approval of Amendment 1 to Loan Agreement 001-10-ECC with the City of Turlock for a one-year, no-cost time extension to August 31, 2012. This term extension will allow the City to complete the upgrade of streetlights from sodium vapor and mercury vapor to induction lighting. Contact: Anne Fisher.
- d. LAWRENCE BERKELEY NATIONAL LABORATORY. Possible approval of Amendment 1 to Contract 500-09-003 with the U.S. Department of Energy, Lawrence Berkeley National Laboratory for a 12-month no-cost time extension to complete EnergyIQ tool enhancements and service extension upgrades. Contact: Kiel Pratt.
- e. SACRAMENTO MUNICIPAL UTILITY DISTRICT. Possible approval of Amendment 2 to Contract 400-09-023 with Sacramento Municipal Utility District (SMUD) to reallocate funds among task budgets to achieve the adjusted single-family and multi-family unit goals, and to add Task 3 for rebate and marketing enhancement activities to enable SMUD to effectively implement the Home Performance Program. The amendment will not increase the total amount of the contract or extend the contract period. Contact: Helen Lam.
- f. COUNTY OF LOS ANGELES INTERNAL SERVICES DEPARTMENT. Possible approval of Amendment 1 to Contract 400-09-024 with the County of Los Angeles Internal Services Department to reallocate funds among various tasks and add two job classifications to allow the county to implement their program more effectively. The amendment will not increase the total amount of the contract or extend the contract period. Contact: Samuel Lerman. (Item moved to June 15 agenda.)

Item 1f was removed from the agenda.

- g. CITY OF WILDOMAR. Possible approval of Amendment 1 to Agreement CBG-09-114 to modify the budget and scope of work, change the type of parking lot lighting from 150 watt induction lighting to 150 watt LED lighting, add pedestrian LED signals, and reduce the number of traffic signal light replacements. The total grant amount of \$134,140 is unchanged. Contact: Elizabeth Shirakh.

- h. CITY OF CALIMESA. Possible approval of Amendment 1 to Agreement CBG-09-048 with the City of Calimesa to change the scope of work, add an additional five ton HVAC unit to the City Hall Annex building, reallocate funds from direct labor, fringe and contract labor to non-labor contract expense and extend the term of the grant from July 15, 2011, to May 31, 2012. There is no change to the total grant budget of \$35,958. Contact: Akasha Kaur Khalsa.
- i. C & G TECHNOLOGY SERVICES, INC. Possible approval of an augmentation of \$15,000 to Contract 09-409-016 with C & G Technology Services, Inc. to complete two final tasks for the development and implementation of an Internet-based version of the California Utility Allowance Calculator. Contact: Adrian Ownby.
- j. CITY OF PACIFICA. Possible approval of the City of Pacifica's locally adopted building energy standards to require greater energy efficiency than the 2008 *Building Energy Efficiency Standards*. Contact: Joe Loyer.

Commissioner Peterman returned to the dais. Vice Chair Boyd moved and Commissioner Peterman seconded approval of the remaining consent items, excluding Item 1a and 1f. The vote was unanimous. (4-0)

- 2. ENERGY COMMISSION COMMITTEE APPOINTMENTS. Possible approval of Siting Committee appointment to the Calico Solar Project Amendment (08-AFC-13C), and ratification of prior Siting Committee orders and actions relating to the Calico Solar Project Amendment (08-AFC-13C). Contact: Galen Lemei. (5 minutes)

Commissioner Douglas moved approval of her appointment as presiding member and Chair Weisenmiller as second member of the siting committee for the Calico Solar Project amendment proceeding, and ratification of prior Siting Committee orders and actions related to the amendment. Vice Chair Boyd seconded the motion. The vote was unanimous. (4-0)

- 3. THE RESULTS GROUP. Possible approval of Contract 400-10-014 for \$75,000 with The Results Group for strategic planning service to assist the Energy Commission's Efficiency and Renewable Energy Division's evaluation and implementation of strategic priorities, structural re-alignment, project management protocol and stakeholder engagement efforts. (ERPA funding.) Contact: Panama Bartholomy. (5 minutes)

Commissioner Douglas moved and Commissioner Peterman seconded approval of Contract 400-10-014. The vote was unanimous. (4-0)

- 4. CALIFORNIA INSTITUTE FOR FOOD AND AGRICULTURAL RESEARCH. Possible approval of Contract 400-10-013 for \$425,000 with the Regents of the University of California, California Institute for Food and Agricultural Research, to support the implementation of the Department of Energy Superior Energy Performance Program in the food and beverage industry. (DOE funding.) Contact: Tony Wong. (5 minutes)

Vice Chair Boyd moved and Commissioner Peterman seconded approval of Contract 400-10-013. The vote was unanimous. (4-0)

- 5. CALIFORNIA DEPARTMENT OF TRANSPORTATION. Possible approval of Contract 600-10-008 for a \$250,000 Interagency Agreement with the California Department of Transportation to add 500 completed surveys to the 1,200 households in

the California Household Travel Survey that Caltrans has planned for the GPS and on-board diagnostic data loggers vehicle instrumentation. These funds will be used to increase the number of renewable and alternative fueled vehicles in the survey and the accuracy of on-road fuel economy measurement. (ARFVT funding.)
Contact: Aniss Bahreinian. (5 minutes)

Vice Chair Boyd moved and Commissioner Douglas seconded approval of Contract 600-10-008. The vote was unanimous. (4-0)

6. VEHICLE BUY-DOWN INCENTIVE RESERVATIONS. Possible approval of a total of \$4,005,000 in vehicle buy-down incentive reservations (ARFVT funding).
Contact: Peter Ward. (5 minutes)

- a. ARATA EQUIPMENT COMPANY (American La France). \$1,280,000 for the buy-down of 40 natural gas vehicles of 26,001 pounds gross vehicle weight and greater.
- b. A-Z BUS SALES, INC. (Blue Bird Corporation). \$500,000 for the buy-down of 25 propane school buses of 14,001 pounds gross vehicle weight and greater.
- c. A-Z BUS SALES, INC. (Collins Bus Corporation). \$500,000 for the buy-down of 25 propane school buses of 14,001 pounds gross vehicle weight and greater.
- d. CREATIVE BUS SALES (El Dorado National). \$15,000 for the buy-down of 5 natural gas vehicles of up to 8,500 pounds gross vehicle weight and \$560,000 for the buy-down of 28 natural gas vehicle of 14,001 to 26,000 pounds gross vehicle weight for a total reservation amount of \$575,000.
- e. CREATIVE BUS SALES (Goshen Coach, Inc.). \$15,000 for the buy-down of 5 natural gas vehicles of up to 8,500 pounds gross vehicle weight and \$560,000 for the buy-down of 28 natural gas vehicle of 14,001 to 26,000 pounds gross vehicle weight for a total reservation amount of \$575,000.
- f. CREATIVE BUS SALES (Rockport Commercial Vehicles). \$15,000 for the buy-down of 5 natural gas vehicles of up to 8,500 pounds gross vehicle weight and \$560,000 for the buy-down of 28 natural gas vehicle of 14,001 to 26,000 pounds gross vehicle weight for a total reservation amount of \$575,000.

Vice Chair Boyd moved and Commissioner Peterman seconded approval of the six buy-down incentive reservations. The vote was unanimous. (4-0)

7. LAWRENCE BERKELEY NATIONAL LABORATORY. Possible approval of Contract 500-10-052 for \$4,911,721 with the U.S. Department of Energy, Lawrence Berkeley National Laboratory for 15 projects to improve building and appliance energy efficiency by developing and deploying new technologies and standards. (PIER electricity and natural gas funding.) Contact: Chris Scruton. (5 minutes)

Commissioner Peterman recused herself and left the room prior to the discussion of Item 7 because of her employment at Lawrence Berkeley National Laboratory through August 2010. Vice Chair Boyd moved and Commissioner Douglas seconded approval of Contract 500-10-052. The vote was unanimous. (3-0)

8. CALIFORNIA INSTITUTE FOR ENERGY AND ENVIRONMENT. Possible approval of Contract 500-10-048 for \$3,978,590 with the Regents of the University of California, California Institute for Energy and Environment, to conduct eleven projects to advance distributed energy and solar hot water generation, and to improve the efficiency of heating, ventilation, air conditioning, and lighting systems. (PIER electricity and natural gas funding.) Contact: Chris Scruton. (5 minutes)

Commissioner Peterman recused herself from the discussion of Item 8 due to a previous financial relationship with the University of California Energy Institute, a subsidiary of CIEE. Vice Chair Boyd moved and Commissioner Douglas seconded approval of Contract 500-10-048. The vote was unanimous. (3-0)

9. NATIONAL RENEWABLE ENERGY LABORATORY. Possible approval of Contract 500-10-053 for \$4.25 million with the U.S. Department of Energy, National Renewable Energy Laboratory to develop and demonstrate natural gas engines that meet or exceed California Air Resources Board 2010 emissions standards and have been integrated into refuse, transit, and Class 8 heavy-duty truck chassis. (PIER natural gas funding) Contact: Reynaldo Gonzalez. (5 minutes)

Commissioner Peterman returned to the dais. Vice Chair Boyd moved and Commissioner Peterman seconded approval of Contract 500-10-053. The vote was unanimous. (4-0)

10. CALIFORNIA INSTITUTE FOR ENERGY AND ENVIRONMENT. Possible approval of Contract 500-10-049 for \$2,515,918 with the Regents of the University of California, California Institute for Energy and Environment (CIEE), to demonstrate PIER-developed and other energy efficient emerging technologies at institutions of higher learning and other venues in California, and to pilot a wide-scale deployment program for established technologies that represent best practices for efficiency in energy-using systems. (PIER electricity funding.) Contact: David Weightman. (5 minutes)

Commissioner Peterman recused herself and left the room due to a previous financial relationship with the University of California Energy Institute, a subsidiary of CIEE. Vice Chair Boyd moved and Commissioner Douglas seconded approval of Contract 500-10-049. The vote was unanimous. (3-0)

11. CALIFORNIA INSTITUTE FOR ENERGY AND ENVIRONMENT. Possible approval of Contract 500-10-023 for \$300,000 with the Regents of the University of California, California Institute for Energy and Environment, to track the progress and capture technical knowledge from California projects funded by the United States Department of Energy under the American Recovery and Reinvestment Act of 2009 to inform California utility smart grid implementation plans and Commission research roadmaps. (PIER electricity funding.) Contact: Pedro Gomez. (5 minutes)

Vice Chair Boyd moved and Commissioner Douglas seconded approval of Contract 500-10-023. The vote was unanimous. (3-0)

12. CALIFORNIA INSTITUTE FOR ENERGY AND ENVIRONMENT. Possible approval of Contract 500-10-055 for \$1,027,230 with the Regents of the University of California, California Institute for Energy and Environment, to provide program support in the areas of technology assessments, research gap identification, technology roadmap development and coordination, and research technology transfer activities. (PIER electric support funding.) Contact: Jamie Patterson. (5 minutes)

Vice Chair Boyd moved and Commissioner Douglas seconded approval of Contract 500-10-055. The vote was unanimous. (3-0)

13. LAWRENCE LIVERMORE NATIONAL LABORATORY. Possible approval of Contract 500-10-051 for \$1.75 million with the U.S. Department of Energy, Lawrence Livermore National Laboratory, to apply high performance computing technology to improve the knowledge of the intermittent generation challenges from integrating high levels of renewable generation on the California electric grid. This research will use advanced optimization and control techniques to assess the system wide need for energy storage, automated demand response and other fast acting energy services to better balance the energy needs of the grid of the future. (PIER electricity funding.) Contact: Mike Gravely. (5 minutes)

Commissioner Peterman returned to the dais. Vice Chair Boyd moved and Commissioner Douglas seconded approval of Contract 500-10-051. The vote was unanimous. (4-0)

14. SIMBOL, INC. Possible approval of Agreement PIR-10-059 for a grant of \$380,000 to Simbol, Inc., to research and develop extraction technologies for strategic value-added minerals from geothermal brines. This a cost-share grant to supplement the recipient's American Recovery and Reinvestment Act award under the Department of Energy's Geothermal Technologies Program. (PIER funding.) Contact: John Hingtgen. (5 minutes)

Vice Chair Boyd moved and Commissioner Douglas seconded approval of Agreement PIR-10-059. The vote was unanimous. (4-0)

15. PORTLAND STATE UNIVERSITY. Possible approval of Amendment 1 to Contract 500-08-024 with Portland State University to add \$984,100 and a 24-month time extension to study how households use energy to enable policy models, technologies and better-informed choices by residential consumers. (PIER natural gas funding.) Contact: Matt Coldwell. (5 minutes)

Vice Chair Boyd moved and Commissioner Peterman seconded approval of Amendment 1 to Contract 500-08-024. The vote was unanimous (4-0)

16. GAS TECHNOLOGY INSTITUTE. Possible approval of Contract 500-10-050 with Gas Technology Institute for \$480,000 to evaluate the current state of hardware, software, and processes being used in California to assess and monitor the condition and health of the natural gas pipeline network. (PIER natural gas funding.) Contact: Matt Coldwell. (5 minutes)

Item 16 was removed from the agenda.

17. KEMA, INC. Possible approval of Contract 500-10-064 for \$447,642 with KEMA, Inc., for evaluation and optimization of concentrated solar power coupled with thermal energy storage. (PIER natural gas funding.) Contact Prab Sethi. (5 minutes)

Item 17 was removed from the agenda.

18. AWS TRUEPOWER. Possible approval of Contract 500-10-057 for \$442,136 with AWS Truepower to develop, demonstrate, and validate an integrated forecasting system that can accurately predict solar photovoltaic plant production on timescales ranging from 15 minutes to 2 days ahead. Key partners include California Independent Operating System and Sempra Energy. (PIER electricity funding.) Contact: Michael Sokol. (5 minutes)

Item 18 was removed from the agenda.

19. CLEAN POWER RESEARCH. Possible approval of Contract 500-10-059 for \$450,000 with Clean Power Research to develop a master solar photovoltaic (PV) database that includes all grid-connected PV systems in California, and validate the solar power output variability for any fleet of PV systems. This project will be done in coordination with the California Independent System Operator, which will integrate the results into its planning process. (PIER electricity funding.) Contact: Zhiqin Zhang. (5 minutes)

Item 19 was removed from the agenda.

20. ENERNEX LLC. Possible approval of Contract 500-10-060 for \$450,000 with EnerNex LLC to gather and analyze intra-hour forecast data for solar photovoltaic production in the Inland Empire region. The resulting data will be used to model, monitor, and primarily analyze impacts of adding 500 MW of photovoltaic capacity to the grid. (PIER electricity funding.) Contact: Gail Wiggett. (5 minutes)

Item 20 was removed from the agenda.

21. TRANSPORTATION POWER, INC. Possible approval of Contract 500-10-058 for \$2 million with Transportation Power, Inc., to design, build, and test a new, low cost and modular fast energy storage technology known as Grid-Saver system, with peak power capacity of 5 megawatts at a projected cost of about 5 times lower than competing battery systems and that can help facilitate integration of utility-scale renewable energy in California. (PIER electricity and natural gas funding.) Contact: Rizaldo Aldas. (5 minutes)

Item 21 was removed from the agenda.

22. PROJECT NAVIGATOR, LTD. Possible approval of Contract 500-10-061 for \$120,000 with Project Navigator, Ltd., to study the effects of utility-scale photovoltaic energy systems on landfill caps, and to develop a guidance manual for the development of landfill-based photovoltaics. (PIER electricity funding.) Contact: John Mathias. (5 minutes)

Item 22 was removed from the agenda.

23. COMBINED POWER COOPERATIVE. Possible approval of Contract 500-10-063 for \$1 million with Combined Power Cooperative to develop and demonstrate “hyperlight” concentrated solar thermal power technology. Hyperlight solar technology has lower costs, land use, and water use per megawatts produced compared to traditional utility-scale solar generation. (PIER electricity funding.) Contact: John Mathias. (5 minutes)

Item 23 was removed from the agenda.

24. WATER RESEARCH FOUNDATION. Possible approval of Contract 500-10-056 for \$425,000 with Water Research Foundation to advance process optimization and energy efficiency in the water industry and to develop a roadmap that identifies and prioritizes energy efficiency research and development opportunities in the water and wastewater industries. (PIER electricity funding.) Contact: Paul Roggensack. (5 minutes)

Item 24 was removed from the agenda.

25. UNIVERSITY OF CALIFORNIA, BERKELEY. Possible approval of Contract 500-10-047 for \$900,000 with the Regents of the University of California, on behalf of the Berkeley campus, to develop long-term energy scenarios for California using a geographical information system framework and high temporal resolution to properly model intermittent sources of electricity. (PIER electricity funding.) Contact: Sarah Pittiglio. (5 minutes)

Commissioner Peterman recused herself and left the room prior to discussion of Item 25 because she is finishing her dissertation at UC Berkeley and her project advisor is the principal investigator on this project. Vice Chair Boyd moved and Commissioner Douglas seconded approval of Contract 500-10-47. The vote was unanimous. (3-0)

Commissioner Peterman returned to the dais.

26. **Minutes:**

- a. Possible approval of the March 30, 2011, Business Meeting Minutes.

Vice Chair Boyd moved and Commissioner Peterman seconded approval of the March 30 Minutes. The vote was 3-0-1. Commissioner Douglas abstained.

- b. Possible approval of the April 20, 2011, Business Meeting Minutes.

Vice Chair Boyd moved and Commissioner Peterman seconded approval of the April 20 Minutes. The vote was 3-0-1. Commissioner Douglas abstained.

- c. Possible approval of the May 4, 2011 Business Meeting Minutes.

Commissioner Douglas moved and Commissioner Peterman seconded approval of the May 4 Minutes. The vote was 3-0-1. Vice Chair Boyd abstained.

- d. Possible approval of the May 18, 2011, Business Meeting Minutes.

Commissioner Peterman moved and Commissioner Douglas seconded approval of the May 18 Minutes. The vote was 3-0-1. Vice Chair Boyd abstained.

27. **Commission Committee Presentations and Discussion:**

Vice Chair Boyd reported on the AB 118 Investment Advisory Committee meeting.

Commissioner Douglas reported on the Efficiency Committee workshop on efficiency standards for battery chargers.

Commissioner Peterman reported she will attend the Western Interstate Energy Board and WIRAB meetings June 9 and 10.

Chair Weisenmiller commented that he attended the recent Cal ISO Board meeting.

28. **Chief Counsel's Report:** Chief Counsel Michael Levy requested a closed session pursuant to Government Code Section 11126(e) to determine whether facts and circumstances exist that constitute a significant exposure to litigation against the Commission.
29. **Executive Director's Report:** None.
30. **Public Adviser's Report:** None.
31. **Public Comment:** None.
32. **Internal Organization and Policy.** None.

Appearances:

Mr. Peter Spaulding, California Department of Transportation

There being no further business, the meeting was adjourned.

Respectfully submitted,

HARRIET KALLEMEYN
Secretary to the Commission